THE INFLUENCE OF ORGANIZATIONAL CULTURE ON ORGANIZATIONAL EFFICIENCY

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FOREWORD

THE INFLUENCE OF ORGANIZATIONAL CULTURE ON THE ORGANIZATIONAL EFFICIENCY: INTRODUCTORY REMARKS

There are more than three decades, since the issue of organizational culture became one of the inevitable contents in management science. The research studies that Geert Hofstede has been doing in the various countries, in deferent regions of the world, has shown transparently the role of the organizational culture and the impact of the informal institutions, mental matrix and syndroms of economic culture in different countries. It took quite a long time since Geert Hofstede became ranked as one of the most influential business thinkers in the world.

Economics and management sciences are more and more incorporating the cultural issues in the researches in order to achieve more realistic and scientific results. Broadening the scope of methodology, introducing elements and tools of neuroscience, behavioral finance and economics and the experimental method, strongly influenced on the results of studies in organizational culture. On the level of national economies, explaining different results when applying the same measures of economic policies in different countries, it was necessary to use the concept of economic culture. The economic culture became one of the main socio-analytical concepts. Similarly, the organizational culture offered not only the concept, but also defined dimensions (by Hofstede and successors) such as: Power Distance, Individualism, Masculinity, Uncertainty Avoidance, Pragmatism, Indulgence versus Rewards, Long Term Orientation etc.

The researchers have been also offering various typologies. Thus, some four types of organizational culture are listed: Clun Culture, Adhocracy, Market Culture and Hierarchy Culture. The problems of communicating

and promoting the companies goals and business ethics to employees and other stakeholders remains one of the most important managerial problems. These problems are evident in the newly established companies, but in the organizations that exist for a long time, as well. The relationship between the behavior of the executives and leaders of the companies, and the job satisfaction of the employees is strongly influencing and designing the organizational culture of the companies.

In this thematic issue of the *LIimes plus journal*, dedicated to the impact of organizational culture, the contributors are analyzing a number of various aspects that are influencing the attitudes of the employees and their behavior. The articles were written by authors coming from Serbia, Slovenia and Montenegro, thus reflecting some of the particularities characteristic for this region. Also, it is important to say that all the articles are based upon empirical researches. This fact gives a certain value to the thematic issues offering evidence of the current state of various aspects within the framework of the concept of organizational culture.

To our mind, the problems of organizational culture (and of economic culture, on the macro level) deserve the attention of the academic society and more efforts in promoting and launching national and international projects. There is a very rich literature dedicated to the problems of organizational culture, and, in the same time, growing novelties in methodology that could be used in order to achieve scientific results. Let us only mention the methods developed in the framework of descriptive statistics, up to the newly created approaches in experimental economics. The scientific journal *Limes plus for social sciences and humanities* is going to support this field of scientific researches, based on the growing interest for, very often, multi disciplinary approaches that combined team members from various fields and to provide a platform for a fruitful academic discussion.

Siniša Zarić

THE INFLUENCE OF ORGANIZATIONAL CULTURE ON ORGANIZATIONAL EFFICIENCY

Part I

ORGANIZATIONAL CULTURE AS A DETERMINANT OF ORGANIZATIONAL BEHAVIOUR

MUTUAL CAUSALITY OF CULTURE AND POWER IN ORGANIZATIONS

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Abstract:

The aim of this paper is to explore mutual causality of organizational culture and power in organizations. Based on the knowledge of the content and nature of organizational culture, as well as of the sources and forms of power in organizations, the paper hypothesizes about the nature and direction of their mutual influence. The main finding of the paper is that culture legitimizes power, while power instrumentalizes culture within organization. The analysis starts with two types of power in organizations: resource and interpretative. Resource power is based on the control over the scarce resources, while interpretive power is based on the control over the interpretative schemes, and thereby also over the organization members' perception, interpretation, and concluding. The conclusion of the paper is that organizational culture influences the power in the organization by means of legitimising the critical resources controlled the superior individuals and groups in the organization who thereby gain resource power. On the one hand, which resource will be perceived as critical, it depends on the collective assumptions, values, norms, and attitudes (that compose the organizational culture's content), and this also determines

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which individual and group will have the power based on the control over that resource. On the other hand, the power instrumentalizes the culture by having the superior individuals and groups impose certain assumptions, values, norms, and attitudes to the organization members in order to create interpretative power. Thereby, powerful individuals and groups use the culture as the means to gaining power. Through the process of perpetuation of power, the mutual causality between organizational culture and power in the organization is being even more intensified.

INTRODUCTION

Organizational culture and power in organization are two fundamental concepts that enable understanding of a large part of human behaviour in organizations. Many decisions, actions, and interactions of the organization members emerge either as the result of their shared values, norms, and attitudes, or as the result of the influence of powerful individuals or groups. Therefore, understanding of the culture as well as the power in the organization is a very important part of organizational behaviour. A complete understanding of these two important concepts in organizational behaviour is impossible without understanding of their interrelations. The knowledge of the nature of organizational culture and power in organizations leads us to assume that culture influences power in an organization, but also that power influences the organizational culture. This relation has been poorly researched so far, and there is a need for its better understanding and more detailed exploration. We cannot fully understand the emergence and the na-

ture of organizational culture if we do not consider the mechanisms through which the structure of power in organization impacts it. On the other hand, understanding of the sources and the distribution of power in the organization is not entirely possible if we do not know how organizational culture impacts them. Therefore, this paper is dedicated to understanding of the nature of the relations between power and culture in organizations. Based on the existing research, the paper will summarize the existing knowledge on the mutual influence of culture and power in organizations, but it will at the same time deepen this analysis with new assumptions and hypotheses. The paper is structured as follows: The concepts of organizational culture and power in organizations will be presented first, while the nature of the mutual influence of these two constructs in organizational behaviour will be investigated in the final part of the paper. Since organizational culture is far more explored and better-known concept, the paper will be less dedicated to it, and more to presenting the concept of power in organizations.

ORGANIZATIONAL CULTURE

Organizational culture is usually defined as a system of assumptions, values, norms, and attitudes manifested through symbols, which the members of an organization have developed and adopted through mutual experience and which help them to determine the meaning of the world surrounding them and how to behave in it (Janićijević 2013; Schein 2004). From the definition, it can be concluded that organizational culture consists of collective cognitive structures, such as assumptions, values, norms, and attitudes, but also of symbols which materialize and manifest its cognitive content. Consequently, it also follows that organizational culture is the result of social interaction between the organization members which takes place during solving the organizations' problems of external adaptation to

the environment and internal integration of the collective (Schein 2004). The successful solutions to these problems are generalized, systematized, pushed into the subconsciousness of the organization members, and thus converted into collective cognitive structures shared by all or most of the employees and managers. Thereby, these collective cognitive structures become a guide to the employees while they interpret the reality and the world surrounding them, as well as a guide for their behaviour (Alvesson 2002). Culture helps employees and managers determine the meaning of the concepts, things, and events both within and outside of the organization (Martin 2002). In conformity with the interpretation of the reality, they also behave in it: make decisions, take actions, and enter interactions with others. Through its influence on the thoughts and behaviour of managers and employees, organizational culture influences different aspects of management and organization. Extensive empirical research has documented that organizational culture affects strategy (Klein 2011), performance control (Deem, Barnes, Segal & Preziosi 2010), organizational structure (Ranson, Hinings & Greenwood 1980), compensation systems (Chen 2010), performance appraisal (Henri 2006), organizational learning (Alavi, Kayworth & Leidner 2005; De Long & Fahey 2000), leadership (Giberson, Resick, Dickson, Mitchelson, Randall & Clark 2009), job satisfaction (Silverthorne 2004), and organizational performance (Wilderom, Glunk & Maslowski 2001).

Collective cognitive structures which are at the heart of organizational culture include assumptions, values, behaviour norms, and attitudes (Brown 1998). Assumptions are descriptive in character, because they explain the nature of the world and relationships in it to the members of organization. Values are prescriptive in character, because they show to the members of organization how they should act and what they should strive for. Norms are unwritten, informal rules of behaviour which are, as a type of social expectations, imposed on all the members of organization in everyday working activities. Attitudes are beliefs of the organization members about certain occurrences or things that predispose their behaviour and their relations to

these occurrences and things. Besides the cognitive component, organizational culture also contains a symbolic component. Namely, the symbols that manifest collective assumptions, values, norms, and attitudes are also part of the culture of an organization. Symbols include everything that can be seen, heard or felt in an organization, and they can by their nature be behavioural, semantic, and material (Dandridge, Mitroff & Joyce 1980).

POWER IN ORGANIZATIONS

Unlike organizational culture, power in organizations has not often been the centre of researchers' attention. Even though it is obvious that the distribution of power within organization can significantly determine its behaviour, the subject of the sources and the structure of power in business organizations has often been neglected. The main reason for this lies in the specificities of the national cultures of the Western countries, especially the U.S., where management and organizational behaviour are developed the best and where there are the most research and literature on the subject. These cultures belong to the cultures with the so-called low power distance (Hofstede 2000). In cultures such as Anglo-Saxon, or German, people do not accept unequal power distribution and they strive to balance it. In such cultures, the desire for power is treated as something wrong, immoral. Power is a "dirty word" and people hesitate to talk about it. Those who, indeed, have power strive to appear as if they actually do not have it, while those who want to gain it keep their desire a secret. It is obvious that research into power cannot be popular in such circumstances. In addition, in the Western countries, there is also a very strong assumption about organizations' rationality. This assumption starts with the axiom that organizations are a rational means for achieving collective goals. Due to this, the structure of power in organizations cannot deviate from the formal structure of authority adjusted to the

need of achieving of these goals, so the company management does not like the explorations of the power structures in their organizations. Still, as the great philosopher Bertrand Russell once said that Power is the fundamental concept in social science, just as equally as Force in the fundamental concept in physics. Therefore, the sources and the distribution of power within organization, as well as the relationship between power and organizational culture deserve the researchers' attention.

Power is usually defined as an individual's or a group's ability to impose their will on others, regardless of resistance. Salancik and Pfeffer (Salancik & Pfeffer 1977, 3) define power as "the ability of those who possess power to bring about the outcomes they desire." Other definitions emphasize the change in behaviour of an inferior participant in the relationship: "A has power over B to the extent that he can get B to do something that B would not otherwise do" (Dahl 1957, 2012–3.). French and Raven have given a similar definition (Robins & Judge 2016, 134) that power exists "if person A could cause person B to do something which was contrary to B's desire". Other definitions also emphasise similar elements: "The power of actor A over actor B is the amount of resistance on the part of B which can be potentially overcome by A" (Emerson 1962, 33). All the quoted definitions show that power is: (1) social in character, that is, it only exists if there are at least two participants in the relationship; (2) ability of superior actor in the relationship to change the behaviour of the inferior actor and force them to perform certain actions, even when the said actions are contrary to the inferior actor's desires or interests. Based on these conclusions, we understand power as the ability of a social actor, whether an individual or a group, to change the opinion and behaviour of another social actor in the given social relation.

Power should be discerned from two very similar concepts: influence and authority. Influence is the process in which one social actor through his/her behaviour (consciously or unconsciously) alters another social actor's behaviour. Power is the ability to achieve influence, that is, the capacity

to alter other people's behaviour. Authority is the concept used in multiple meanings. Most often, it means legitimate power, that is, the power justified (legalized) by a law, institution, or organization. This authority is then named *formal authority* and it implies the right to exercise influence. Defined in this way, authority can be both greater and lesser than power. If authority is wider than power, this practically means that the authority's intermediary does not have enough power to exercise their right to influence other people. On the other hand, if someone's power is greater than their formal authority, this means that they have the „ability to influence even the things they have no legitimate right to influence."

In defining power and identifying its sources, two approaches have emerged thus far: resource and interpretative. Each of these approaches is directed towards different form, or type, of power in organization. In order to fully understand power, it is necessary to know both of these approaches, that is, both sources and types of power. Likewise, in order to understand the relationship between organizational culture and power, it is necessary to analyse it from the perspective of the culture's relationship with both types of power, since this relationship is different with respect to resource power and interpretative power.

Resource Power

The theoretical basis of resource power in organizational theory was given by the American sociologist of Austrian origin, Blau (1969), in his hypothesis about *social exchange* between individuals and groups in organizations. In his view, individuals engage in all types of social communities, including business organizations, in order to gain certain benefits. Due to this, however, they must perform certain activities which create some benefits for other organization members as well. This is why relations in organizations

are reciprocal – if one wishes to gain something from another individual or a group, one must give something in return. Organizations satisfy the interests of their members by having them exchange the benefits among themselves. In addition, the benefit does not have to be only a material one, because the members of organization do not fulfil only their existential needs, but also the needs for belonging and love, respect, self-assertion, etc. This exchange can be balanced, meaning that what one organization member receives from another one is neutralized by what he/she gives in return. However, power emerges when the exchange among the organization members is unequal, that is, when some members provide to other members something that they cannot reciprocate. Since inferior members cannot adequately reciprocate for the provided benefits (resources), they must subjugate their will or behaviour to the will of the superior member, that is, to the one who provides them with these resources or benefits. Therefore, an unequal exchange between the members of social communities lies at the very basis of resource power. The main source of power of an individual or a group in an organization is the ability to control the resources.

The control over limited resources is the basis of most concepts of power in organizations. All explanations about the sources of power of individuals or groups in organizations are based on some form of ability to control the resources that others need, yet cannot provide on their own. From the perspective of the control over the resources, there are two main concepts that explain the sources and structure of power in organizations.

The first concept is the Resource Dependency Model by Salancik and Pfeffer (Salancik & Pfeffer 1977). In this model, the power of an individual or an organizational unit emerges from their ability to control the resources that are critical for the given organization. Resources may be understood relatively widely, so they to not only include material and financial resources, but also knowledge and information, which have in the past decades become increasingly important for company's operations. In addition, even the access

to government institutions could be a critical resource for an organization, so then the persons or groups who have such access also gain the greatest power in the organization. The cruciality of the resources stems from their three main dimensions: 1. Importance for Organization's Functioning. The resource that becomes the source of power must have a great importance for the organization. Usually, it is the resource having a central position in the organization's functioning, and its functioning cannot be imagined without it. In order for the knowledge of customers' needs to be the source of power of the organization's marketing sector, it must be important for the company. This will be prominent only in the situation of a highly prominent competitive battle in the market, or in the so-called customers market. Similarly, the development sector can have power only in the branches with dynamic technological changes, since what this sector does becomes important only for companies in those branches; 2. Scarcity. In order for a resource to be the source of power, it must be relatively scarce. If anyone can gain access to a resource, then it cannot serve to anyone as a source of power. Knowing customers' needs, for example, can be the source of power of sales or marketing sectors only if it requires a particular expertise that not everybody has; 3. Possibility of Substitution. The power that a certain resource enables also depends on the possibility of its substitution. The power of a superior individual or group also depends on the alternatives that inferior individuals or groups have. If they have several alternatives regarding the resources' use, each of these resources will enable less power. This is how we arrive to the concept of power elasticity: it shows the sensitivity of the power of an individual or a group in the circumstances when other alternatives exist for the resource which enables this power to the individual or group. If it is less likely that the resource controlled by a certain unit can be replaced, the power elasticity is lower and the power is greater.

Which resource would be critical, and therefore become the foundation for power differentiation, it depends on several factors. Above all, it depends on the environment in which the organization is functioning. It is cer-

tain that in a company operating in software or other industries with highly intensive product development, the critical resource will be precisely the knowledge in technology through which the product can be developed and, consequently, the company's development sector will be the most powerful organizational unit. In other companies, working in highly intensive market competition, the critical resource will be the consumer, so marketing sector will be the most important organizational unit. In the circumstances of low liquidity and scarcity of financial resources, finances are the critical resource in many of Serbian companies; hence, the financial sector is the most powerful one, while financial manager is the second most important person in the company (following immediately after general manager). It should be noted that critical resources can also change over time and during company's development, so the company's power structure also changes accordingly.

Within the resource perspective, Hickson and his associates formulated the source of organizational unit's power in another way, by constructing Strategic Contingency Model (Hickson, Hinings, Lee, Schneck & Pennings 1971). This model is based on the assumption that organization is an open system, which must adapt to the environment in which it operates in order to achieve its goals. Therefore, every organization faces uncertainty regarding future events in the environment and factors that operate in it. Uncertainty jeopardizes normal functioning of the organization. The aim of every organization is to reduce uncertainty regarding the events in the environment to the minimum in order to be able to stabilize its business operations and achieve its goals. The organizational unit which succeeds in decreasing uncertainty in the environment will be the most important one for normal functioning of the company and also of other organizational units. It will achieve the highest influence on all other units, and it will have the strategic contingency from which also emerges the greatest power. If, for example, the highest uncertainty that the company faces is related to the customers' needs and wants and their changes, then the commercial or marketing sectors most effectively decrease this uncertainty. The normal functioning of other

company sectors depends on the said sector, so it gains the highest power within the organization. If, however, the key uncertainty is related to new technologies and changes in the product characteristics, then it is most likely that the highest power will be concentrated in the development sector, since all other sectors depend on its ability to reduce the uncertainty regarding new technologies. The Strategic Contingency Model introduces two more sources of power. Along with the ability to reduce uncertainty, the power of organizational unit and individuals in the company is also impacted by the central position of the said unit or individual. The individual or unit having the central position in the company also has a relatively greater power than others. Central position implies the highest intensity of communication and mutual causality between organizational units. Finally, the power of organizational unit is also impacted by the possibility of substituting its activities.

Interpretative Power

Lukes (1974) created the basis of interpretative power. He identified three different dimensions of power. The first dimension of power implies the classic resource power emerging from the control over scarce resources. This power implies an open conflict of interests and an open conflict between the subordinates and the superordinates. The inferior individuals or groups must obey the orders of the superiors in order to obtain the necessary resources. Although subjugated to the will of the superiors, the inferior individuals or groups are aware of their subordinance and the temporary abandonment of their interests. This type of power is also called decision-making power.

The second dimension of power implies that power does not have to be manifested only when the conflict is open, but also when it is latent. Superior individuals or groups do not prove their power only by winning

in an open confrontation and by forcing the other party to accept their will. They also prove their power by not allowing the conflict to occur in the first place – the conflict of interests still exists, but it is latent, and not open. This dimension of power is not based on the prevailing of the other party's interests, but on their suppression. In that case, the powerful individual or group most often does not allow for an issue to occur as a problem. This is why this type of power is called non-decision-making power.

The third dimension of power, in Lukes' view, includes the ability to shape people's awareness. It is not about prevailing of other people's interests (the first dimension) or their suppression (the second dimension), but about shaping of the interests of inferior individuals or groups by the superiors. The source of power in the third dimension is in the process of social construction of reality. This type of power is called interpretative power because it is based on the control of interpretation of reality by those who have the power. In most social groups, there are prominent individuals who have the ability to structure the ways in which those around them think. They give meaning and explanations to the things and occurrences they are surrounded with, which the others accept. In every social group, there are individuals who are ready to let others interpret reality. The superior members of the group then assume control over the process of interpretation of reality and shape the consciousness, the way of thinking, and even the way in which the inferior members behave (Smircich & Morgan 1982). The source of power in this case is the control over the interpretative schemes and over the processes of interpretation of reality. The prevailing opinion in the literature is that leaders have this type of power, and that it is precisely what separates them from managers, who have resource power (Northouse 2007). The explanation of the third dimension of power clearly shows that it is potentially the most effective source of power. In this type of power, there is no conflict of interests at all, so the conflict does not exist altogether. The reason for this lies in the fact that the inferior party is unaware of its real interests, so therefore it cannot represent them. By accepting the way of interpretation of the real world

and the meanings offered by those who control their consciousness, the subordinate individuals or groups at the same time also accept the definition of their own interests. They believe that the existing order of things is the only possible and/or useful order for them, and this is the reason why there is no resistance and conflict. In applying the first dimension of power, the control over inferior individuals or groups is external, so there must be some kind of external force that will manipulate the resources, and thereby force the subordinate individual or group to act in accordance with the wishes of the superordinate. In the third dimension of power, however, the control over the inferior individuals comes from within; people are controlled by their own consciousness which was previously shaped according to the will of those who have power. The best part of all for the superior individual or group is that the inferior individual or group do not even notice that they are under control, so therefore they feel free and, as the consequence, they do not see the need to fight against the superior individual or group.

MUTUAL INFLUENCE OF CULTURE AND POWER IN ORGANIZATION

The relationship between culture and power is bidirectional in the nature of mutual influence. The direction of the influence depends on the type of power: resource power or interpretative power. Organizational culture is the factor that influences the sources and the structure of the resource power in organization, and in this role, the culture legitimizes power in the organization. On the other hand, organizational culture represents the means for gaining interpretative power, and in this role, it is the object of power that instrumentalizes the culture. Therefore, on the one hand, power in organization is gained based on cultural assumptions, values, and norms, while, on the other hand, those who have power create these cultural assumptions,

values, and norms. Through its values and norms, the culture legitimizes the existing power structure in organizations by proving to the organization members that this power structure is justified, useful, or natural. On the other hand, those who wish to gain power instrumentalize the culture by using it in the process of gaining power.

Through its assumptions, values, and norms, the organizational culture significantly influences the sources and structure of the resource power in organizations. Namely, the strategic contingency and resource dependence models start with the assumption that the source of power lies in the control over critical resources, that is, over the sources of uncertainty. Likewise, it is also assumed that the sources of uncertainty and critical resources in the company are identified objectively, rationally, and impartially. This assumption is, however, very naïve. Many theories, and especially the ones dealing with the process of decision making in organization, have shown that this process is all but objective and rational (March & Simon 1958). Therefore, we have no sound reason to believe that critical resources will also be identified through a rational and objective process. Instead, identifying of critical resources is subjective, irrational, and biased, and it is often the result of psychological and political factors. For example, one research has shown that the relative power of the company's sectors depends on the degree of congruence of their internal values and norms with the ones held by top management, and not on their control over the critical resources (Entz 1986). The sector that shares mutual attitudes and beliefs with top management will also have the greatest power in the organization.

Instead of a naïve assumption about objective and rational identifying of critical resources in an organization, we must adopt a more likely assumption that identification of the critical resources is impacted by the collective assumptions, values, and norms about the organization and its environment. Knowledge is, for example, one of the resources that can be the source of power. However, it also matters which knowledge and about what is considered important for the organization. Only the knowledge considered

critical for survival and development of the organization can be the source of power. Which knowledge will that be, this highly depends on the culture and its assumptions about the nature of business the company operates in. If, for example, assumptions and values of the organization as a technical system prevail in its culture, then it is highly likely that technical knowledge about the products and technological processes will be more important than the knowledge about the market. In such culture, the greatest power will belong to the company's techno-structure (located primarily in the production and development sector), regardless of the fact that the market, rather than technology may be the critical resource for the company. Conversely, in the market-oriented culture that highly values market results in the form of market share, sales, and profit, the organization's critical resource will be the knowledge about customers, competition, etc. In such culture, the greatest power will be in the hands of sales and marketing experts, and therefore in marketing and sales sectors, regardless of the fact that technology may be the company's critical resource.

By its influence on identifying of the critical resources the controlling of which proves power, the culture indeed legitimizes the structure, sources, and also owners of the power within the organization. In order for some source of power, and thereby also the carrier of power, to become legitimate, it must be justified and useful from the perspective of the organization and its members. In other words, in order for a source of power to be acceptable for the organization members, they must believe that it is useful for achieving of the organizational, but also their own personal goals. Whether they will believe in it or not, it depends on the entire system of assumptions and values dominant in the organization, that is, in its culture. When people designate some resource as critical and important, they thereby legitimize the power emerging from the control over that resource. This is why we say that organizational culture, by influencing the choice of critical resources and the sources of uncertainty in organization, also influences the sources and the structure of power and thereby legitimizes the power and its owners.

Interpretative power is created when superior individuals – leaders – impose certain assumptions, beliefs, and values to the inferior individuals and groups, thus determining the meaning of reality for them and also determining their opinions and behaviours in that reality. Therefore, in the process of gaining interpretative power, organizational culture is the instrument of power. It is created and used by the leader in order to gain power. The leader imposes certain assumptions, values, norms, and attitudes to the organization members, thus shaping their interpretative schemes, and thereby also their opinions and behaviours. The result of this is that other organization members behave in the way that the leader wants, whereby he/she gains power over them. Therefore, by shaping the culture as a set of collective assumptions, values, norms, and attitudes, the leader gains power. Unlike resource power that is legitimized by organizational culture, when interpretative power is concerned, the culture is subordinated – an instrument to gain power. This is why we say that interpretative power instrumentalizes the organizational culture. Therefore, the processes of creating of organizational culture and of gaining interpretative power are inseparable.
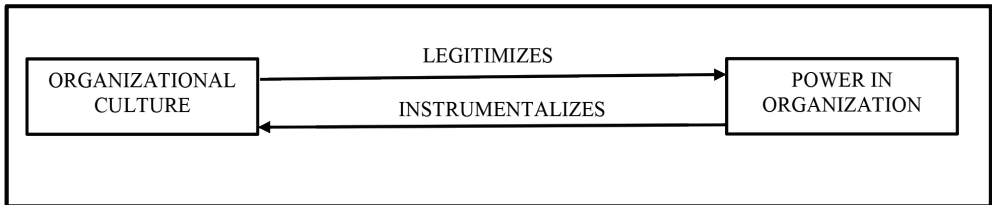
Figure 1. Mutual influence of organizational culture and power in organization

The relationship between organizational culture and power in the organization should be observed not only statically, but also dynamically. If we observe the relationship between power and culture in the organization dynamically, we will find that culture may lead to self-renewal of power and that power may lead to self-renewal of culture. Perpetuation of power is a long-known phenomenon which consists in the fact that those who have

power can use it in order to gain more power (Salancik & Pfeffer 1977). Simply put, those who control some critical resource, and have the power based on that, can use this power in order to obtain more resources or control over them, and hence gain even more power. However, the relationship between power and culture in organization points to yet another possible way of self-renewal of power: an individual or a group, who have the power owing to the control over resources, may use this power in order to impose certain cultural assumptions, values, and norms. In this way, powerful individuals not only subsequently legitimize their power, but also, in addition to the resource power they already have, they gain interpretative power through the process of instrumentalization of culture. On the other hand, an individual or a group, who gained interpretative power through creating certain cultural values and norms, may use this power in order to gain control over critical resources, and thus, in addition to the interpretative power they already have, also gain resource power. They do this through the process of legitimization of their power.

CONCLUSION

Organizational culture and power in organization are important determinants of organizational behaviour, that is, of the behaviour of people in organizations. Organizational culture with its assumptions, values, norms, and attitudes shared by the members of organization determines the way in which they perceive, interpret, and understand the reality within and outside of the organization and also how to behave in the said reality. It is an intrinsic determinant of behaviour because it acts from "within" – through adopted cognitive structures. On the other hand, power in organization also determines how its members behave as individuals or as groups. Inferior members of organization willingly or unwillingly take actions and make de-

cisions in the way that the superior members of organization, as individuals or groups, demanded from them. Organizational culture and power in organization interact because they influence each other. The collective assumptions, values, norms, and attitudes influence the creation and distribution of the power of individuals and groups in organization, while, on the other hand, powerful individuals and groups gain their power by creating mutual cognitive structures that are at the basis of organizational culture.

The two-way relationship between organizational culture and power in organization lies in the fact the culture legitimizes power, while, on the other hand, interpretative power in the organization instrumentalizes its culture. Namely, though its assumptions, values, norms, and attitudes, organizational culture determines the resources that enable individuals and groups to, by controlling them, gain power. Therefore, culture makes the source and the distribution of power legitimate. On the other hand, superior individuals and groups in an organization gain interpretative power by imposing certain assumptions, values, attitudes, and norms on other organization members, thereby creating the culture of organization. In this way, the superior individuals and groups in organization instrumentalize the culture, that is, make the culture an instrument for gaining power. The two-way relationship of mutual influence between organizational culture and power is intensified through self-renewal of power, because power is used to strengthen the existing culture, while culture is used to strengthen and expand the existing power.

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UZAJAMNA UZROČNOST KULTURE I MOĆI U ORGANIZACIJAMA

Rezime:

Cilj ovog rada je istraživanje međusobne uzročnosti organizacijske kulture i moći u organizacijama. Na osnovu poznavanja sadržaja i prirode organizacijske kulture, kao i izvora i oblika moći u organizacijama, u radu se postavlja hipoteza o prirodi i smeru njihovog međusobnog uticaja. Glavni rezultat rada je da kultura legitimira moć, dok moć instrumentalizuje kulturu unutar organizacije. Analiza započinje s dve vrste moći u organizacijama: resursnom i interpretativnom. Moć resursa temelji se na kontroli nad oskudnim resursima, dok se moć interpretacije temelji na kontroli nad shemama interpretacije, a time i na percepciji, tumačenju i zaključivanju članova organizacije. Zaključak rada jeste da organizacijska kultura utiče na moć u organizaciji putem legitimiranja kritičnih resursa kojima upravljaju nadređeni pojedinci i skupine u organizaciji koji time stiču moć resursa. S jedne strane, koji će se resurs smatrati kritičnim, to ovisi o kolektivnim pretpostavkama, vrednostima, normama i stavovima (koji čine sadržaj organizacijske kulture), a to takođe određuje koji će pojedinac i grupa imati moć koja se temelji na kontroli nad tim resursom. S druge strane, moć instrumentalizuje kulturu tako što nadređeni pojedinci i skupine nameću određene pretpostavke, vrednosti, norme i stavove članovima organizacije kako bi stvorili interpretativnu moć. Stoga moćni pojedinci i skupine koriste kulturu kao sredstvo za sticanje moći. Kroz proces održavanja moći, međusobna uzročnost između organizacijske kulture i moći u organizaciji još više se pojačava.

Ključne reči: organizaciona kultura, moć resursa, interpretativna moć, organizacija, legitimizacija, instrumentalizacija

ROTATION MANAGEMENT MODEL IN NURSING

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Abstract:

The model for optimizing nursing care organization in psychiatric institutions enables us to compose teams in a way that will meet the requirements of the work process in any given situation, thus yielding quality for patients, employees and institutions (lower time consumption for preparing work schedules and performing supervision, reduced number of everyday interventions by managers, etc.). Rotation model will be presented, which contributes to optimizing human resource capacity of health care. Therefore, the staff rotation model is a good start and contributes to the development of managerial practices that will be focused on ensuring a suitable work environment and appropriate work conditions while promoting good work relationships between the managerial staff and the employees and ensuring employee health and work satisfaction. Employees want rotation as an instrument of equalizing workload and workplace requirements.

This indeed reflects the basic quality of developing approaches to staff assignment practices. The following areas constitute the optimization conditions: The kinds of teams which are needed at individual wards (size, number of hours to be worked, etc.); The positions in individual teams which are already occupied by people who remained within the department and at the same workplace over the entire period in question and were never reassigned elsewhere; The number of people in each individual team and their roles (leader, deputy, etc.); The name list of the assigned employees and their capabilities calculated by linear program according to Belbin team roles indicator. The project approach to the optimization of nursing care teams is determined on the basis of the above-mentioned key conditions. The process of optimizing staff assignment to teams consists of ten general modules which represent several managerial activities in the optimization of work processes.

1. INTRODUCTION

For many reasons, including rapid social changes and numerous measures for improving the quality of work and reducing the costs of work processes, etc., public services require a great deal of adjustability from their employees. New approaches to leadership and organization of work processes are constantly needed. Changes within health care unavoidably co-relate with changes in public services. Lately, knowledge of quality, highly professional, cost-acceptable, safe, and economical health and social care is becoming increasingly important. Experts agree that in order to achieve the key improvements in the health care area, work should be focused primarily

on increasing efficiency, productivity, and quality of the whole health care system. The demands should be met and the goals achieved with better management and yet with the same resources.

Most demands for rationalization of business operations are addressed to executive managers of health establishments. According to the Ministry of Health plans, they should all possess managerial knowledge and skills, including the employees at the middle management level who directly organize work processes, make duty rosters, and supervise other employees. Experts have described a nurse-cum-manager with a vision, a strategy to realize it, and the ability to win over and enthuse co-workers to join forces in achieving common goals, who recognizes the fact that the successful accomplishment of tasks is based on team efforts. She also inspires co-workers to follow her with confidence, is well respected, and possesses excellent communication and negotiation skills. Organization and leadership styles are important also in nursing care since they affect the creation of work environment, sense of well-being among the employees, and work-related interpersonal relationships. Job satisfaction is important for being successful at work and for achieving quality.

Patients should receive quality care in a professional environment that includes good partnership relations among all participants. Therefore, the existing work planning guidelines should be upgraded with the introduction of changes and improvements in the system of work scheduling and staff deployment in nursing care. The existing personnel deployment models in psychiatric nursing care are experience-based and differ between the institutions.

Working on the same ward for many years may lead to professional isolation, lack of professional communication, stagnation of professional knowledge, and inefficiency of the nursing team. An up-to date model of personnel rotation should be designed that would improve the workplace-related sense of well-being, reduce burn-out, and more evenly distribute work-

load. It should also acknowledge inner motivation for work and changes since the nursing staff is increasingly drawing attention to stress associated with their work. These endeavours should help improve an institution's overall results, since motivated and career-oriented workers tend to be more satisfied with their respective chosen professions and their work. Opportunities for improving professional knowledge and personal development arise from individual awareness and determination, and the ability to adapt to organizational changes. It promotes gaining of experience, increases employability, and broadens competencies in professional, political, and personal engagements.

Apart from other measures, optimization of work processes may also be achieved by job rotation, a well-known method for increasing staff satisfaction and work motivation, learning new skills, and improving work results. In nursing care in Slovenia, job rotation is not widely recognized as an approach to forming the work environment, a tool for improving jobs, and a means of acquiring knowledge and work skills in various areas.

Job rotation programmes differ depending on the size of the institution and work process requirements. Employees included in job rotation programmes may discover wide possibilities for gaining additional skills as opposed to those who focus and/or specialize in a narrow professional field. This article describes the advantages of job rotation for institutions as well as for their employees. The advantages for institutions become evident in cases of absence when posts have to be filled, such as during sick or annual leaves, or in times of staff shortfall. Employees benefit regardless of the approach; either in the above mentioned cases or when job rotation is a human resources strategy, they acquire new skills and/or knowledge for conquering diverse work challenges. Job rotation programmes should be well prepared and employees should be familiarized with them. Leaders should also be trained to implement these changes in day-to-day practice.

2. STAFF ROTATION AS AN OPTION FOR OPTIMIZING WORK ORGANIZATION

The design of work environment has been studied using a scientific approach since 1900. The foundations for this approach were laid by Taylor and Gilbrecth[1]. The notion of rotation is at the very core of the approach to work environment design that is used in many organizations around the world and at various hierarchical levels. It is also an excellent tool for practicing job improvement measures. According to its definition, job rotation (or job swap) is defined as a systematic flow of employees from one workplace to another.[2]

One of the definitions of rotation includes working on various tasks for a certain period of time. Rotation is also a method for designing job positions, i.e. workplaces at which employees can learn the skills required to perform work in several areas[3]. It is the result of efforts and dedication invested in the design of work environment and consistent improvement of work performance. The first condition for this is that rotation should provide the expected results with respect to employee motivation. From this viewpoint, it can be said that rotation reduces monotony, prepares employees for better work results and increases their level of knowledge.[4]

In many work environments, interest in people goes above interest solely in their technical achievements and analysis of the work environment or job positions, respective training or performance measurement. In project organization related to job planning, the work envi-

1   Kaymaz, K. 2010. The Effects of Job Rotation Practices on Motivation: A Research on Managers in the Automotive Organizations. BER. 1, 3, 69-85.

2   Dessler G., Varkkey B. 2009. Training and development. Human Resource Management. New Delhi: Dorling Kindersley (India) Pvt. Ltd, 304.

3   Jorgensen, M., Davis K., Kotowski, S., Aedla, P., Dunning, K. 2005. Characteristics of job rotation in the Midwest US manufacturing sector. Ergonomics. 48, 15, 1721-1733.

4   Kaymaz, K. 2010. The Effects of Job Rotation Practices on Motivation: A Research on Managers in the Automotive Organizations. BER. 1, 3, 69-85.

ronment and employee wellbeing are at the very forefront of current efforts.[5] From the notional viewpoint, job design is defined as the determination of special contents and the choice of methods and relationships between individual job positions to make sure that they correspond to the company's requirements and personal expectations of its employees, both in terms of organization and content[1]. This definition also includes the fact that well-designed and described job positions increase employee satisfaction and motivation, reduce stress, encourage learning efforts[1], and have a positive effect on employee performance[6].

Among the tools used for staff development, experts[1] mention rotation. An increasing number of foreign and Slovene organizations now enable rotation, with the aim of achieving excellence in several areas. On the one hand, this helps the staff further develop the already known talents and capabilities, and on the other it improves those skills which could not be developed to the same extent before. In the case of employing people from outside of the organization, a human resources plan is in place which needs to be presented to all new employees. This plan also serves to empower the existing staff, thereby "strengthening those competencies (knowledge, abilities, skills and values) which the staff lacks with respect to the company's business model, strategy and business needs, and the situation related to the actual competencies of the company's employees"[7]. This is one of the available opportunities for organizations to improve their inner capacities and achieve better exploitation of resources. The above author claims that in Slovenia, this part of the market is "still too static", which means that while it allows vertical and horizontal progress within the scope of each individual's work tasks, it does not enable the recognition of excellent talents or their

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5 Campion A, M., Mumford V, T., Morgeson P, F., Nahrgang D, J. 2005. Work redesign: Eight obstacles and opportunities. Hum Resour Manage. 44, 4, 367-390.

6 Garg, P., Rastogi, R. 2006. New model for job design: Motivating Employees performance. J Manag Dev. 25, 6, 572-587.

7 Žezlina, J. 2013. Kako pametno kadrovati. DOI= http://www.finance.si/8333927/Janez-Žezlina-Kako-pametno-kadrovati.

appropriate development. Like many foreign experts, he also believes that such work method would create an opportunity to extend the employment relationships of those individuals who are of paramount importance to the company. In this way, companies could be winners and would become the best in their field, as they would achieve a higher level of flexibility and adaptability.

Professionals in the field of organization and management[8] define rotation as systematic movement of employees occupying one job, from one area to another within the same institution, for periods of one year at a minimum. Many reasons favouring the implementation of the employee rotation system are stated, including increased quality of work and new opportunities for employees to find new career paths for themselves; in his opinion, the most important incentive is to prevent boredom and stagnation of job-related knowledge. Employee rotation programmes differ amongst themselves and also change over time depending on the size and type of the institution, as well as the needs of work processes[9]. In this respect, the above-mentioned author mainly discusses partial or daily rotations, in which for a part of the day such individuals work at different locations, so that they could e.g. participate in a certain project, as well as for other similar purposes. The author also mentions job swaps over shorter periods of time; these are intended to provide substitute staff, for example while another employee is absent due to maternity or sick leave, or during holidays, or to fill a free position until a new employee is hired. Such rotation is beneficial primarily for the institution, because it makes sure that the work gets gone; this is because it primarily takes into account the needs of the work process, and much less those related to employee motivation. Ultimately, in such a way employees

8   Fiester, M., Collis, A., Cossack, N. 2008. Job Rotation, Total Rewards, Measuring Value. HRMagazine. 53, 8, 33-34.

9   Anonymous, 2008. How Job rotation Can Enhance Training Effectiveness. AOMAR, 8, 8, 2-4.
         Anonymous, 2008 a. Energize & Enhance Employee Value With Job Rotation. HR Focus. HRMagazine. 85, 1, 6-10.

always learn new skills and have to cope with various job-related challenges, but their motivation is different. Collaboration between departments and functional teams is another form of cooperation that may assist individuals in quicker professional development.

The overall employee rotation strategy comprises the following four steps[1]: assessment of the situation; planning; implementation; and evaluation. The authors claim that good preparation of rotation is crucial for the success of any programme. In their opinion, the programme needs to be planned very precisely and clear rules need to be made as to who shall be eligible for assignment to specific job positions and workplaces, or whether all job positions and workplaces shall be accessible to all employees. It should also be established whether the programme will be compulsory for all employees and whether individuals will be allowed to opt out of it without consequences. For clear understanding of mutual expectations, it should be known from the very beginning whether all employees as well as the managers shall be equally included in the programme. The types of knowledge that is planned to be strengthened through the job swap process also need to be determined, including the exchange of knowledge between professional and managerial job positions. Experts[10] believe that through a meticulous analysis of feasibility, predictable issues, communication with provision of support from leaders and managers, and preparation of realistic work schedules for all job positions included in the swap, organizations both large and small can expect tangible value from job rotation. However, the measurement of rotation success can be quite a difficult task. The author quotes Thomas J. Miceli, Professor of Economics at the University of Connecticut, who expects the results of rotation to be exhibited via non-material indicators, such as e.g. improved employee morale, and manifested in a measurable manner in the form of increased productivity, reduced job changes and reduced work absences[1].

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10   Fiester, M., Collis, A., Cossack, N. 2008. Job Rotation, Total Rewards, Measuring Value. HRMagazine. 53, 8, 33-34.

Many companies are not effectively taking care of their talented employees and they design their work environment as a closed system, instead of keeping fresh energy moving via rotation and thus contributing to the development of their employees and the company as a whole. Employee rotation may also provide better chances than formal education. The above-mentioned author states study results which indicate that 75% of knowledge is acquired at the job, i.e. at the relevant workplace[2]. It also makes sense to assign employees to the positions for which they are best suited, so as to use their talents and stimulate their capabilities. Naturally, certain specific features and limitations need to be taken into account when planning rotation. A system needs to be designed that includes a general plan involving a series of issues, such as rotation time, objectives, assessment criteria, risk assessment, mechanisms for harmonizing the rotation schedules, etc. A comprehensive assessment of each employee's capabilities also needs to be made, so that they can be assigned to the most appropriate positions within the rotation plan, making sure that the two are matched[11,12].

Before making a decision, managers usually perform a qualitative analysis based on their own experience and conclusions of analysis of the problem being solved, as well as a quantitative analysis based on the relevant mathematical and statistical methods. In solving the problem, managers usually use data on several aspects of the situation, and then they adopt a decision. However, when the problem being solved is highly complex and the manager is unable to decide without quantitative data, or when it is very important and the manager does not have enough experience with this type of problems, or if the problem frequently recurs, the use of a quantitative model saves much effort and time, and decision-making then becomes more of a routine task[13].

11   Bei, Z. 2009. Some Thoughts on the Practice of Job Rotation in Accounting in Colleges and Universities. Manag Sci Eng. 3, 3, 91-95.

12   Fujino, M., Nojima, Y. 2005. Effects of ward rotation on subsequent transition processes of Japanese clinical nurses. Nurs Health Sci. 7, 1, 37-44.

13   Torkar, D. 2003. Optimizacija portfelja naložb v Zavarovalnici Triglav. Specialistično delo. Univerza v Ljubljani, Ekonomska fakulteta, Ljubljana.

Rotation cannot be successfully implemented without appropriate communication with the employees and without their cooperation because in such a way willingness to change and to work wholeheartedly[1] can be achieved. This is because employee rotation requires much precise work instead of mere issuing of orders or imposing of measures. In addition, one has to make sure that all employees have understood the rotation plan and the content of work to be performed. Sometimes, a training period is necessary for them to acquire the necessary skills, information and instructions for new work.

3. MANAGEMENT IN PRACTICE

Modern environments differ from those of the past. Management and managerial knowledge are very current topics and are subject to much discussion at professional conferences, as well as in related papers and at meetings. More than ever before, in quickly changing healthcare systems nurses are expected to also possess some managerial knowledge. This is corroborated by Rozman[14], when he states that "there is probably no doubt that management or directorship is the most important work in companies, as well as in other communities". Regardless of the fact that managers are not directly included in the manufacturing process, they are still the most important factor, as their work contributes to better performance, as well as coordination and effectiveness of the work of their employees. They hold power because they coordinate others and determine their tasks, objectives and duties; they also make decisions about important issues in the company. The author claims that the success of a company is crucially dependent on the appropriate manager or "director". He sees a problem primarily with respect to those people who do not have sufficient managerial knowledge or the ability to connect with their staff, and partially also in

14   Rozman, R. 2010. Študij managementa (ravnateljevanja) nasploh in s poudarkom na bolonjski reformi. Izzivi managementu. Management Challenges. 2, 2, 36-40.

the fact that management in Slovenia has only been developing for a short time, and this means insufficient education is available for the demanding managerial work[15]. Good managers quickly become good role models.[16] Their attitudes have a crucial influence on the course of events in institutions and good managers can expect more from their staff if they are available for discussion and provide consistent support and assistance. A stark, inaccessible and negative stance is not helpful at all. Therefore, in the opinion of some authors,[17] managers need constant development, research and training in practice. They believe that "management and directorship" can be learned, although some inborn traits can also help them achieve good performance. They are convinced that one should always follow the requirement for "creativity, innovation and research". Changes in the level of difficulty of managerial positions nowadays represent a new, more complex stage in modern nursing care. Adequate education in the field of management is now needed to achieve appropriate results in health care. Such changes can be achieved by thinking in line with the institution's strategy, having a sense of belonging, being willing to cooperate and solve problems, comply with the requirements, present work results and prepare proposals for their improvement, as well as by being oriented towards enhancements, excellence and development. In nursing work, managerial skills are now more important than ever for achieving good work results.

15   Rozman, R., Kovač, J. 2012. Management. GV Založba, Ljubljana.

16   Tschudin, V. 2008. Kaj je skupno managerjem in etiki? Gradivo za strokovno srečanje Management zdravstvene nege v luči etike, 27. in 28. februarja, 2008, Ljubljana, Društvo medicinskih sester, babic in zdravstvenih tehnikov Ljubljana.

17   Rozman, R. 2010. Študij managementa (ravnateljevanja) nasploh in s poudarkom na bolonjski reformi. Izzivi managementu. Management Challenges. 2, 2, 36-40.

4. OPTIMIZATION PROCESS MODEL IN NURSING CARE

The model was developed and tested at a clinic in Slovenia. In this case, it was found that it is possible to use optimization models in the deployment of nursing care staff. This has also been proven with the use of a linear programme based on Belbin test metrics. An optimization model for job rotation in day-and-night services in the public sector has been developed that is also applicable to other nursing care areas and to public services in general. It represents a good start and contributes to the development of managerial practices focused on providing suitable work environment and conditions, stimulating good work-related interpersonal relations between management and staff, and considering the health and satisfaction of the employees. This actually reflects the fundamental quality of the developing approaches to staff deployment. Although job rotation model in nursing care stems from a general rotation model in public services, it has been supplemented with the specific characteristics of nursing care staff established by the Belbin test.

The model for optimizing nursing care organization in psychiatric institutions enables us to compose teams in a way that will meet the requirements of the work process in any given situation, thus yielding quality for patients, employees and institutions (lower time consumption for preparing work schedules and performing supervision, reduced number of everyday interventions by managers, etc.

Figure 1: *Correlation between employee workload and sick leaves in departments with non-extreme sick leaves*
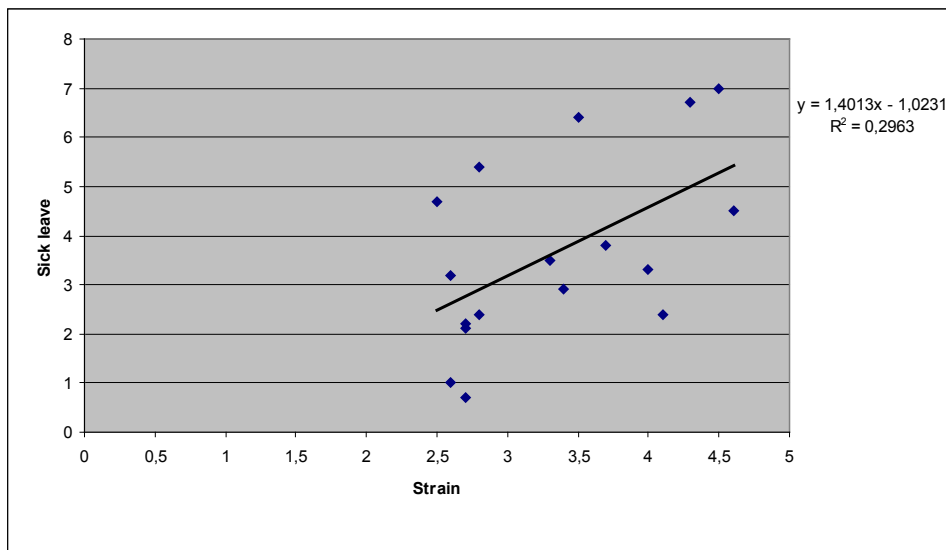
Source[18]

Figure 1 shows a moderate correlation (correl = 0.54) between the assessment of employee workload and sick leaves in departments with non-extreme sick leaves. Sick leave rates are correlated with work difficulty; it was found that difficult departments are characterized by higher sick leave rates. This finding has resulted in the implementation of the rotation model.

4.1. Rotation model for nursing staff in the field of psychiatry - optimization model

The optimization of work processes is a procedure with which the manager has to choose such team composition that, within the given limitations and possibilities, the expected nursing care will be provided at the opti-

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18   Peterka N., J. 2014. Optimizacija organizacije zdravstvene nege v psihiatričnih zavodih. Doktorska disertacija. Univerza v Ljubljani, Fakulteta za upravo.

mal level. The solving of this problem comprises both qualitative and quantitative analyses. The first is usually based on the manager's experience and assessment of the problematic situation, and the second on various mathematical and statistical techniques. In our case as well, data from the Belbin test were taken into account, as well as data from surveys on employee attitudes towards job rotation, including the general conditions for organizing nursing care to ensure compliance with the prescribed quality standards. The goal of optimization is therefore to achieve optimal team composition as measured by Belbin test metrics, i.e. the maximum score for all teams and for employee satisfaction.

4.2. Model of optimal team composition

The criterion of optimization is the achievement of the maximum score in the Belbin test taking into account employee attitudes towards rotation and limited work conditions in the field of psychiatry[19].

An i-th employee (i=1,2,…,I) is assigned to the j-th role (j=1,2,…,J) in the k-th team (k=1,2,…,K), so that the criterial function of Belbin values would reach the highest possible value:

$$\sum_{i=1}^{I}\sum_{j=1}^{J}\sum_{k=1}^{K} a_j\, x_{ijk} = \max_j$$

Where:

j=1 – team leaders,
j=2 – leader's assistants,
j=3 – team workers

19   Peterka N., J. 2014. Optimizacija organizacije zdravstvene nege v psihiatričnih zavodih. Doktorska disertacija. Univerza v Ljubljani, Fakulteta za upravo.

The criterial function coefficients are determined on the basis of selected Belbin test values:

- aij – candidate's score i for role j in the team (i=1,2,..., I; j=1,2,...,8) according to the Belbin test

- x_{ijk} – value of the variable [0,1] of candidate i for role j in team k (i=1,2,..., I; j=1,2,...,8, k=1,2,...k)

The conditions for occupying individual roles in nursing care teams are written so as to fill the teams with the lowest permissible number of places.

Conditions:

- Y_k number of k-type teams (j=1,2,...,8, k=1,2,...k),

- b_{jk} lowest number of j-type roles in a k-type team (j=1,2,...,8, k=1,2,...k),

$$\sum_i x_{ijk} - b_k Y_k = 0$$

- S - Upper limit of all employees assigned to teams for the stated period:

$$\sum\sum\sum x_{ijk} \leq S$$

- Condition for single employee assignments (i.e. each employee can only be assigned to one place over a certain period):

$$\sum_{j=1}^{8} x_{ij} \leq 1$$

Number of team members performing a certain j role (sum of all employees assigned to j-roles in k-type teams):

$$\sum_{k} \sum_{i=1} X_{ijk} = b_j^o$$

b_j^o - limit for the number of j-type roles in all teams

Conditions for the above limits and non-negativity of the solution:

$$X_{ijk} > 0$$

and

$$Y_{k\,(max)} > y_k > 0$$

- $Y_{k\,(max)}$ k-type teams, limit.

This model was tested using real data. Data were collected on 29 employees working in nursing care teams at the Ljubljana University Psychiatry Hospital. For designing work schedules, at least 25 employees were needed for normal functioning of four (2 closed and 2 open) wards. It was planned to use employees of the VIIth educational level for the roles of team leaders and their deputies, and for this 6 employees were needed; the remaining ones were assigned to other team roles. All employees having the Vth educational level were assigned to the free positions of medical technicians. The size of the test form of the model was as follows: over 60 variables and almost 30 conditions.

For the criterial function coefficients aij, the average results of tested employees having the VIIth educational level were used for the "chairman" role in the team, and employees having the Vth educational level were used for the roles of "company worker, team worker, or monitor-evaluator".

The processes for optimizing the allocation of staff time consist of ten modules which represent several activity management features to optimize work processes. The content description of each module can be developed based on research findings and the associated knowledge from the fields of organization, personnel capabilities, rules on resource constraints, and methodology of optimization of employee time schedules.

4.3. The activities which are part of the optimization process can be listed as follows:

Module 1: Determination of the optimization framework

Decision-making about the time period and organizational units to be included in the optimization, determination of optimization conditions, and the criteria for and list of employees included in the optimization model.

Module 2: Definition of human resource capacities

Assessment of employee data (i.e. their attitudes towards rotation) acquired by means of a survey on staff rotation and HR capacities, done using Belbin test.

Module 3: Definition of quality conditions

Provision of data on the optimization criteria (quality indicators, content-related conditions).

Module 4: Definition of human resource limitations

Provision of data on the work organization in individual departments and sectors.

Module 5: **Designing of the model and optimization of staff schedules**

Harmonization of the conditions from the employee viewpoint and the organizational viewpoint, followed by the calculation of optimal solutions.

Module 6: **Analysis of the feasibility of solutions**

Critical analysis of the results and of the rotation plan's feasibility.

Module 7: **Analysis of the reasons for infeasibility of solutions**

Identification of the reasons for unfeasible solutions.

Module 8: **Changing of the optimization conditions**

Implementation of harmonization procedures and supplementing of optimization conditions.

Module 9: **Confirmation of the feasibility of solutions**

Confirmation of acceptable solutions.

Module 10: **Implementation of rotation**

Completion of optimization and implementation of staff rotation.

Figure 2: *Model of implementation optimization teams*

Module 1.

DETERMINATION OF THE OPTIMIZATION FRAMEWORK

Module 2.

DEFINITION OF HUMAN RESOURCE CAPACITIES

Module 3.

DEFINITION OF QUALITY CONDITIONS

Module 4.

DEFINITION OF HUMAN RESOURCE LIMITATIONS

Module 5.

DESIGNING OF THE MODEL AND OPTIMIZATION OF STAFF SCHEDULES

Module 8.

CHANGING OPTIMIZATION CONDITIONS

Module 6.

ANALYSIS OF THE FEASIBILITY OF SOLUTIONS

Module 7.

ANALYSIS OF THE REASONS FOR INFEASIBILITY OF SOLUTIONS

Module 9.

CONFIRMATION OF THE FEASIBILITY OF SOLUTIONS

Module 10.

IMPLEMENTATION OF ROTATION

Source[20]

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20   Peterka N., J. 2014. Optimizacija organizacije zdravstvene nege v psihiatričnih za-
       vodih. Doktorska disertacija. Univerza v Ljubljani, Fakulteta za upravo.

5. CONCLUSION

The optimization model is comprised of a number of methods and analyses which are used by the nursing care management team within the scope of rotation. The key factors, which should not be overlooked, are as follows: each nursing care employee has his/her own capabilities which need to be (measured and) taken into account when designing nursing care teams; optimization is performed over a long period, as it depends on the general attitude of employees towards rotation; rotation should serve as a corrective measure to improve the work atmosphere; rotation cannot be implemented without an appropriate methodology (based on how the staff feels) because this is an extremely complex problem with many variables and conditions, as has also been shown by the size of the described test model.

The presented research results confirm that the management of nursing care can lead to various optimization effects. Previous research has also proved the benefits of the search for and development of optimization models for staff rotation in healthcare teams. Our experiences from a Slovenian hospital have also confirmed this finding.

Reasonably and advisably, future research should address staff and management experience after the implementation of the job rotation model, as well as work-related satisfaction, stress and motivation in the most demanding environments. The contribution of managers empowered in this way as creators of adequate work environment has had beneficial effects on establishing and ensuring suitable work environments, employee satisfaction, and a decrease in sick leaves, the latter being a major problem in nursing care.

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Rezime:

Model optimizacije organizacije bolničarske službe u psihijatrijskim institucijama omogućuje da komponujemo timove na način koji će odgovoriti zahtevima procesa rada u svakoj datoj situaciji, na način koji znači kvalitet za pacijente, zaposlene i institucije (manje potrebnog vremena za pripremne radnje i za superviziju, smanjenje broja svakodnevnih intervencija menadžera, itd). Prikazani rotacioni model doprinosi optimizaciji kapaciteta ljudskih resursa u zdravstvu. U tom smislu, rotacioni model osoblja predstavlja dobar početak i doprinosi razvoju upravljačkih praksi koje će biti usmerene na obezbeđenje odgovarajućeg radnog okruženja i odgovarajućih uslova rada promovišući dobre odnose u radu između menadžera i zaposlenih, te obezbeđujući zdravlje zaposlenih i njihovu satisfakciju na radu. Zaposleni žele rotaciju kao instrument koji ujednačava radno opterećenje, kao i zahteve na radnom mestu. Ovo zaista odražava osnovni kvalitet razvoja pristupu praksi rasporeda osoblja. Sledeće oblasti čine optimizirajuće uslove: vrste timova koje je potrebno individualizovati prema veličini, broju radnih sati, itd; pozicije u pojedinim timovima koje su već zauzete ljudima koji su ostali u odeljenjima kao i na istim radnim mestima za vreme čitavog perioda koji se posmatra i koji nisu bili ponovo upućeni na druga mesta; broj ljudi u svakom pojedinačnom timu i njihova uloga (lider , pomoćnik, itd); lista imena odabranih zaposlenih u njihove sposobnosti koje su kalkulisane linearnim programom prema indikatoru Belbinovih timskih uloga. Projektni pristup optimizaciji timova je određen za bolesničku negu na osnovu napred spomenutih ključnih uslova. Proces optimizacije određivanja osoblja u timove sastoji se od deset osnovnih modela koji predstavljaju veći broj menadžerskih aktivnosti u procesu optimizacije radnih procesa.

Ključne reči: optimizacija, model rotacije zaposlenih, bolničarska služba, psihijatrija

THE CHANGE OF THE ORGANIZATIONAL CULTURE IN HOTELS IN MONTENEGRO

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Abstract:

Organizational culture is a topic that has received a great deal of attention in the scientific literature. All the influences that an organization is exposed to over the course of its lifetime, whether coming from the outside or from the inside, also reflect on its culture, exposing it to minor or major changes. The primary goal of this research paper is to determine the character of dominant models of organizational culture in the tourism and hospitality sector of Montenegro, as well as the dynamics of changes in organizational culture in the considered research period. Research Methods: A random sample was used for research purposes. When it comes to the research techniques we used a survey technique, and within the aforementioned technique we used a survey questionnaire, more precisely modified Cameron's and Quinn's questionnaire (OCAI) for the diagnosis of organizational culture. The questionnaire was modified to obtain information on cultural changes that have occurred in the past. The results of the research indicate that the largest number of hotel and catering companies in Montenegro had the organizational culture of the clan 5 years ago, while the current situation shows that the present organizational culture in the hotel and catering companies

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in Montenegro is a culture of hierarchy. We believe that the results of this research will provide the basis for understanding different types of organizational culture in hotel and catering companies in Montenegro, which will contribute to the creation of knowledge that can be used by managers of tourism companies in Montenegro and thus achieve a competitive advantage and better business performance.

Keywords: organizational culture, types of organizational culture, change of organizational culture, hotels, Montenegro

INTRODUCTION

In the conditions of fierce competition in the market, the survival and development of tourism enterprises depends primarily on the ability to constantly monitor changes in the environment and to adapt appropriately to global trends. In order to adequately meet the demands of the changing and uncertain environment in which they operate, hotel and restaurant businesses need to develop the ability to adapt and respond easily and quickly to changing business conditions. In this context, organizational culture is a particularly important element of the ability of tourism enterprises to change and adapt to changes in the environment.

Organizational culture embraces different concepts, values, and ideas, and may contain values that promote stability and conservatism, and may also support flexibility and change (Janićijević 2011, 164–167).

Organizational culture determines all decisions in the company, including decisions about change, and largely reflects and determines the attitude of management on openness, propensity for change, risk, etc. Therefore, the modeling of the culture that enables and supports openness to changes in

the organization is imposed as a significant requirement of modern business. Integration activities in the tourism sector of Montenegro, the entry of multinational hotel corporations, recognizable brands, with a dominant share of foreign capital, lead to changes in the organizational culture in Montenegrin hotels. The presence of multinational hotel chains reflects a part of the national culture from which they originated (Hofstede 2001, 9), and a change in the assumptions, values, norms and attitudes upon which tourism businesses in Montenegro used to be based. Tourism companies have been taken over by larger, organized and formalized companies, which leads to a change in organizational culture and this should be explored.

In Montenegro, researches of this type are very rare, and their lack is especially felt in the area that we can freely consider the main branch of the Montenegrin economy, and that is tourism and hospitality.

Therefore, there is a real need to fill these apparent gaps in the study of organizational culture in Montenegro, both from a practical and scientific point of view. It is significant in all branches of the Montenegrin economy, but, as the tourism sector has as a driving force for the development of the local economy, organizational culture has its highest importance in this sector. We consider this fact an important argument for the justification of research that could offer a scientific basis for properly understanding the role of organizational culture in shaping the business strategy of Montenegrin hotels.

1. THE ROLE AND IMPORTANCE OF ORGANIZATIONAL CULTURE

Most management authors define organizational culture as a complex system of shared values that members of an organization use in their actions and activities (O'Reilly, Charles, Jennifer Chatman, and David F. Caldwell. 1991, 487–516). Values such as community, creativity, performance

and efficiency act as a foundation for an organization's culture, which creates its identity and separates it from the competition (Denison 1984, 4–22; Sorensen 2002, 70).

For Edgar Schein, organizational culture is: "a pattern of common underlying assumptions that a given group invented, discovered, or developed by learning how to solve problems of external adaptation and internal integration that work well enough to be considered valid and, as such, transferred to new members as the correct way of perceiving, thinking, and feeling in relation to these problems" (Schein 1983, 1–2). According to Schein, the basic assumptions are the deepest subconscious layer of the cognitive content of organizational culture, on which all other layers rest. Schein's definition is also generic - it explains that fundamental assumptions are created in the process of solving the problems of external adaptation and internal integration, ie. adapting to the environment and building strong and stable interpersonal relationships, and that successful solutions are further passed on to the new members of the organization as a pattern of properly perceiving, thinking and emotionally experiencing the organization.

Organizational culture arises and develops itself with the development of the organization itself. Among the authors who study organizational culture, there is consensus on explaining the process of the emergence of culture, in which a cognitive approach prevails, shaped by Edgar Schein (Schein 1985, 24) in his work „Organizational Culture and Leadership" in 1985. According to his opinion, organizational culture arises in the process of group problem solving,that members of one group or organization are faced with.

A review of numerous theoretical and empirical works aimed at identifying the content of organizational culture shows that this content can be structured into two large and heterogeneous groups of components: cognitive and symbolic (Schein 2004, 31). The cognitive elements of organizational culture include the cognitive structures of organizational members with their elements: assumptions, values, attitudes, norms (Balthazard, Cooke & Potrer

2006 according to Janićijević 2013, 41), while symbols represent a visible part of organizational culture - one that can be heard, seen or felt and which manifests, represents and communicates the meanings produced by the cognitive elements of culture (Frost, Moore, Louis, Lundberg & Martin 1991, 243–253).

The typology of organizational culture involves its classification according to the common characteristics of the numerous varieties in which it is present in practice. Quinn and Cameron (Cameron & Quinn 1999, 35) classify organizational culture as a culture of clan, hierarchy, market, and adhocracy. Clan culture is characterized as an organization that is a very friendly place for its members, as an extended family. The culture of the hierarchy is characterized as a strictly formalized and structured environment aimed at maximizing its efficiency. Adhocracy culture is characterized by an entrepreneurial spirit and innovation in problem solving, while market culture is characterized by an orientation towards achieving the best possible result (Cameron & Quinn 1999, 37–45).There is, however, an important difference in the culture of the market compared to the culture of the hierarchy, in which control and stability are particularly emphasized. Namely, while in organizations with a hierarchy culture, stability and control are achieved through rigid formalism of rules, standard procedures and centralized decisions, market-oriented organizations are much more flexible because they have to adapt to the prevailing market conditions (De Witte & Van Muijen 1999, 497–502).

The need for a permanent study of organizational culture finds its full justification in the fact that its role is crucial in shaping an efficient and flexible organization(Alvesson 2002, 80). Organizational culture is one of the key factors for understanding both organization and change affecting businesses (McLennan 1989, 169–200). Sustainable changes in the company are possible only through lasting changes in the behavior of employees and managers, whose preconditions are changes in their values, norms and attitudes - changes in the whole organizational culture (Beer & Walton 1987, 339–367).

In the literature, the process of changing organizational culture is most often characterized as a long-term one, and most authors take a period of 3 years as a minimum time required for a change. However, Scholz considers that it takes 5-15 years to change organizational culture (Scholz 1987, 86, 78–87). Janićijevic does not share such estimates, but rather selectively considers the time dimension of the organizational culture change process, which depends on the size of the organization in which the change takes place, as well as the scope and depth of change. He believes that in small organizations, the change can take place in just a few months, and that in the case of large corporations, it can take years.

Unfortunately, in the business practices of the former Yugoslav republics and now independent states, these studies are limited to only a few researchers who are continuously addressing this issue. However, these relatively few research papers conducted by domestic researchers are mostly dominated by a generalized approach to the problems of organizational culture, while the study of its role and influence in certain specific areas of organizational life is also reduced to a small number of research papers. Zaric and Babic (2017), reviving the interest in entrepreneurship, underline the importance of self-management tradition in ex Yugoslavia for creating sharp organizational differences with other communist countries. According to these authors, because of the strong self-management tradition, workers in Serbia today are still showing more incentives and more activities in the process of bettering the companies' performances (Zaric & Babic 2017). Cross cultural variations, differences between organizational models of behavior of German and Serbian students of economics, were discussed in the recent study of Zaric and Babic (2017). The authors analyzed how differences in the cultural models of the two countries affect the decision making of a student of economic sciences.

The scientific purpose of the research is to get answers to the following questions: whether and to what extent did the organizational culture change during the period under study, which type of organizational culture

was predominant before, and which is dominant now in hotel and catering companies in Montenegro.

2. THE TRANSITION OF THE TOURISM SECTOR OF MONTENEGRO

The current structure of the tourism sector in Montenegro is the product of a transition process from a system of socialist self-management to a system of market economy. The biggest change in this process occurred in the ownership and organizational structure of tourism enterprises, which were transformed from self-governing socially owned work organizations into various forms of private companies with participation of domestic and foreign capital. Although, there were examples of successful tourism companies in the then socialist economy of Montenegro (city-hotel Sveti Stefan, Ulcinj's Ada Bojana, hotel complex in Bečići), too much state interference and politics in the economy, bureaucratization, advancement along the political party line, the insufficient knowledge and appreciation of market laws, the treatment of social property in the spirit of the maxim of "everyone-ness" led to the socialist self-government generally proving to be an unsuccessful experiment (Ratković 2009, 129–131).The collapse of the common state, followed by the international isolation and the imposition of economic sanctions on its successor - the Federal Republic of Yugoslavia, and in fact Serbia and Montenegro as its sole members - has produced a general stagnation of the entire Montenegrin economy. Its mainstay, tourism, was rapidly losing its international market. Only in the period after the year of 2000, there has been a gradual recovery of tourist traffic and a period of stabilization, and Montenegro is again recognized as a safe tourist destination(Adžić and Žižić 2016, 15).

It is clear that in this period the organizational culture in tourism businesses was characterized by a high degree of demoralization, general uncertainty, latent dissatisfaction with low-income employees and fear of job

loss due to significantly reduced capacities. At the same time, it became clear that the existing organizational structure of tourism businesses and businesses could no longer meet the demands of the times.

The process of transition of social property first to statal (state funds) and then to private, resulted in a situation in which today there is a total of 423 hotels, 470 restaurants and 335 fully privately owned agencies in Montenegro (data from the Central Tourist Office records register of Montenegro). The massive voucher privatization, which officially ended in Montenegro in 2002, has led to radical changes in the ownership, management and personnel structure of existing tourism and hospitality facilities. In the following period, many new facilities were opened, whose owners, mostly new businessmen, mostly had no previous experience in the hospitality industry (Ratković 2009, 137).

This was followed by a wave of buying, leasing and building hotels with a dominant foreign capital share, so the Montenegrin hotel industry today is characterized by an increasing presence of global hotel brands such as: Aman, Best Western, CentreVille, Hilton, Iberostar, Karisma, La Roche, One & Only, Orascom, Ramada, Regent, Sheraton et al.

The presence of the global hotel brands has been increasing in recent years, as the Montenegrin Government has created an environment that is very favorable to foreign investors, such as a 9% profit tax that makes Montenegro the most competitive in the environment.In the tourism and hospitality industry, through a set of laws and regulations, significant improvements to the general and especially transport infrastructure, as well as successful promotional activities, the Government of Montenegro has taken a number of measures to encourage investment. After more than 5 years of work on the reforms of the planning process, the Government of Montenegro has proposed The Law on Amendments to the Law on Spatial Planning and Construction of Buildings on 16th May 2013, which brought shortening of the deadlines for issuing permits and lower costs to investors (Horwath 2013, 7).

From that moment, tourist establishments, 4-star hotels and tourist resorts were defined as objects of general interest, which are exempt from paying utilities. Montenegro's determination is to create a high quality tourism product. This implies an intensive improvement of quality and a significant transformation of the hotel offer and the overall infrastructure, in order to improve Montenegro's competitive position as a tourist destination.In this sense, the Government of Montenegro is interested in carefully managing the development of tourist accommodation offerings, in such a way that priority is given to the sustainable development of the accommodation capacities of recognizable brands that creates the greatest benefits for the economy, both in terms of income and employment (Horwath 2013, 7–8).

The need for more sophisticated services raises the country and its destinations' ratings. With the entry of world brands on the Montenegrin market, standards, that are very strict and structured, have been adopted, with priority given to the formalization of the process, and the effort put in in order to improve the quality of services in the tourism and hospitality industry.

Such significant changes that have occurred as a result of the privatization process, the entry of global brands and change in the ownership structure, certainly lead to changes in the organizational culture within the company, and it needs to be explored in order to see in what direction and in what way the culture has changed so far.

Accordingly, the primary objective of the research is to determine the character of dominant models of organizational culture in the tourism and hospitality sector of Montenegro, as well as the dynamics of changes in organizational culture in the considered research period.

Due to the rapid growth of the hospitality objects in the recent years and the advent of global hotel brands, we have decided to limit our research timeframe to the period of the last five years. Namely, as many as 1/3 of

Montenegrin hotels have organizational experience of less than 5 years, and extending the research period to 10 or more years would exclude from the research almost half of the hotels established during that time period.

In that sense, we established the hypothesis.

Hypothesis 1: In the process of transition of the Montenegrin economy, the dominant organizational culture of the hotel and catering companies was transformed from a clan culture into the culture of the hierarchy.

With the change of the ownership and organizational structure after the transition to market economy, we expect a culture of hierarchy, because tourism enterprises are taken over by larger, organized and formalized companies, or have fallen into the hands of private entrepreneurs, guided primarily by the desire to achieve great profitability and efficiency by applying a hierarchical management model and directives, which made it seem logical to assume that there would be a change in the cultural pattern from clan culture to hierarchy culture.

3. RESEARCH METHODOLOGY

The empirical research of this paper starts from the understanding of organizational culture and the fact that the Montenegrin economy is predominantly focused on the tourism sector, in which the tourism offer of domestic hotels and their services plays a particularly important role, which prompted us to focus our basic hypothesis on the analysis of the present trends changes in the organizational culture in these companies with the aim of determining whether and to what extent there has been a change in the organizational culture in the hotels in Montenegro.

According to the time orientation, this is a transversal study, a measurement at a single point in time, with the aim to empirically check and

analyze changes. Therefore, the first step is to identify the different types of organizational cultures that dominate the organizations under study. Then, we want to identify if there was a change in organizational culture in hotels in Montenegro in the observed research period and if there was, in what type was the organizational culture transformed.

When it comes to the research techniques, we will use the survey technique, and within the mentioned technique a survey questionnaire, more precisely, a modified Cameron's and Quinn's questionnaire (OCAI) for the diagnosis of organizational culture, was prepared. The questionnaire was modified to provide information on cultural changes that have occurred in the past. The questions relate to the dominant characteristics of the organization, leadership in the organization, people management, unity of the organization, strategic focus and criteria for success (Cameron and Quinn 2011, 28–34). Cameron's and Quinn's questionnaires belong to a group of typological questionnaires and on its basis organizational culture is classified into one of four types: culture of clan, hierarchy, market and adhocracy.

3.1. The process of defining a research sample

In the current "Rulebook on Types, Minimum Technical Conditions and Categorization of Catering Facilities" available on the Ministry of Sustainable Development and Tourism website (MORT 2018), catering establishments are classified according to the type and manner of providing catering services: (1) catering facilities for the provision of accommodation services and the preparation and serving of food and beverages; (2) catering facilities for the provision of food and beverage preparation and serving services.

The Central Registry of Business Entities (CRPS) of Montenegro has in its database a total of 1228 business entities registered under the code 5610

of the tourist industry. Businesses are categorized according to the activity they perform in three main categories: hotel companies (423), restaurant businesses (470), and businesses that operate as travel agencies (335). The subject of this study is hotel companies in the tourist economy of Montenegro, and accordingly 423 hotel companies represent the population from which the sample will be obtained.

Due to the nature of the research being conducted, which refers to the period of organizational culture change in the last five years, the relevant research companies are only those that are more than five years old and their number is: 400 hotels. In addition, as tourism is one of the prior and leading branches of the economy in Montenegro, and there is a clear difference in the representation by regions of Montenegro, the additional subject categorization by region is considered relevant for the described research subject, thus obtaining: the northern region of Montenegro 54 hotels, central region of Montenegro 82 hotels and southern region of Montenegro 287 hotels.

Regarding the intended sample size, some authors consider a sample to be 10% of the population if its size makes it possible to conduct reliable data analyzes and test the significance of differences in estimation (Kerlinger 1986, 35–37). Other authors offer formulas for calculating sample size, for the assumed level of precision, and the confidence interval. Using proportional allocation methods, the size of the sample stratum will be proportional to the size of the population stratum, thus ensuring generalization of conclusions after the research has been conducted (Bontis 1998, 63–76).

Based on these formulas, given the final population and the most commonly used precision level of 5% and the confidence interval of 95%, in this study a representative sample size is 47 hotel and catering companies, with the representation of all three regions: the northern region of Montenegro 7 hotels , the central region of Montenegro 12 hotels, and the southern region of Montenegro 28 hotels (Cochran 1977, 64;Israel, 1992 as stated in

Yaman 1967, 182). Since the research is aimed at analyzing organizational

culture changes at the level of different organizations, the research is conducted on a representative sample of employees from selected organizations, while subsequent stratification of the number of employees for each company will be done based on the size of the company and the structure of jobs within the organization.

As stated in this study, we analyzed a total of 47 hotels, of which 7 were hotels in the northern region, 12 hotels in the central region and 28 hotels in the southern region of Montenegro. The sample is designed to cover 10% of the population of each region individually. Based on the parameters, we can see the disproportionate development of the tourist regions of Montenegro, as well as the disproportionate allocation of receptive capacity resources, that is, hotel and catering facilities, which indicates a significant underdevelopment of the northern and to some extent central region, while on the other hand, all tourism activity is concentrated in the southern region of Montenegro.

Table 1. presents the categorization of employees in terms of their demographics, which include age, gender, qualifications, seniority and job level.

Table 1. Categorization of employees by gender, age, qualification, seniority and job level

Age	Gender		TOTAL
	Men (%)	Women (%)	
To 25 years old	86 (50,59%)	84 (49,41%)	170 (17,78%)
From 26 to 35 years old	157 (52,33%)	143 (47,67%)	300 (31,38%)
From 36 to 45 years old	139 (46,96%)	157 (53,04%)	296 (30,96%)
From 46 to 55 years old	74 (46,83%)	84 (53,17%)	158 (16,52%)
From 56 to 65 years old	12 (37,50%)	20 (62,50%)	32 (3,35%)
Educational background			
Lower (elementary school)	6 (60%)	4 (40%)	10 (1,04%)
Secondary school	245 (53,26%)	215 (46,74%)	460 (48,12%)
Higher education	155 (43,17%)	204 (56,83%)	359 (37,55%)
University	59 (46,46%)	68 (53,54%)	127 (13,28%)
Years of service			
To 5 years	96 (47,06%)	108 (52,94%)	204 (21,34%)
From 6 to 10 years	127 (50,80%)	123 (49,20%)	250 (26,15%)
From 11 to 20 years	162 (47,93%)	176 (52,07%)	338 (35,36%)
From 21 to 30 years	65 (52,42%)	59 (47,58%)	124 (12,97%)
From 31 to 40 years	18 (47,37%)	20 (52,63%)	38 (3,97%)
More than 40 years	1 (50,00%)	1 (50,00%)	2 (0,26%)
Job level			
Manager	171 (53,27%)	150 (46,73%)	321 (33,58%)
Executive	296 (46,61%)	339 (53,39%)	635 (66,42%)
TOTAL	467 (48,85%)	489 (51,15%)	956 (100,00%)

Source: research conducted by authors

Descriptive statistics show that 467 male respondents participated in the study or 48.85% and 489 female respondents or 51.15% respectively, so we have a gender balance. Respondents who expressed their age were divided into five age groups: respondents less than 25 years old, comprising 170 respondents or 17.78% of the sample. Respondents 26-35 years old make up 31.38% of the sample, respondents 36-45 years old make up 30.96% of the sample, 46-55 years old have 16.52% of respondents, while the smallest number of respondents of 3.35% are over 65 years old age.

Regarding education, the respondents were divided into four categories: lower (primary school); medium (secondary school); higher; high education (faculty, master, doctor degree). The survey presents the highest number of respondents with secondary education and higher education: 48.12% with high school and 37.55% of respondents with higher education. Only 1.04% of the respondents had primary school education, while the rest of the respondents or 13.28% had a high school diploma or a master's or doctoral level of studies.

For the purposes of the survey, we also took into account the years of work experience of the respondents, and divided them into 6 categories: up to 5 years of work experience are 21.34% of the respondents, which due to the nature of the research we exclude from the sample. 26.15% of respondents have 5-10 years of work experience, 35.36% of respondents have 11-20 years of work experience, 12.97% of respondents have 21-30 years of work experience, 3.97% of those with work experience of 30-40 years of service, and among the respondents there were only two respondents with more than 40 years of work experience, or 0.26%.

The level of workplace included managerial and executive, of which 33.58% were managers and 66.42% of executives in the sample.

Due to the nature of the survey, we excluded employees whose work experience in the organization is less than 5 years of service, which reduces the sample to 752 respondents.

RESULTS AND DISCUSSION OF THE RESEARCH

Based on the conducted research, the results of the study indicate that the largest number of hotels in Montenegro had an organizational culture of the clan 5 years ago, while the current situation shows that the present organizational culture in the hotel and restaurant companies in Montenegro is a culture of hierarchy. The empirical part of the research reveals that there has been a change in organizational culture in Montenegrin hotel and restaurant companies. Namely, organizational culture has transformed from a clan culture into a culture of hierarchy.

Table 2. Dominant types of organizational culture in hotels and restaurants in Montenegro

1. Dominant characteristics of organization

Average	Currently	5 years ago
A	23	37
B	18	18
C	15	26
D	43	19
TOTAL	100	100

Graphic background

	Results	Currently	5 years ago
	Flexibility and discretion	14,5228619	17,32097316
B	*Adhocracy*	18,45	18,37
	External focus	11,68332576	15,29790071
C	*Market*	14,96	26,31
	Stability and control	15,73613039	15,43435125
D	*Hierarchy*	43,43	18,65
	Internal focus	21,36162896	17,49610646
A	*Clan*	23,16	36,75

2. Leadership in the organization

Average	Currently	5 years ago
A	22	52
B	15	17
C	18	14
D	45	16
TOTAL	100	100

Graphic background

	Results	Currently	5 years ago
	Flexibility and discretion	12,87749255	18,10621012
B	*Adhocracy*	15,31	16,95
	External focus	11,59743483	11,03944019
C	*Market*	17,66	14,47
	Stability and control	17,8863149	10,82155665
D	*Hierarchy*	44,56	16,24
	Internal focus	21,12486942	17,52740444
A	*Clan*	22,47	52,33

3.Employee management

Average	Currently	5 years ago
A	20	51
B	21	16
C	23	15
D	36	18
TOTAL	100	100

Graphic background

	Results	Currently	5 years ago
	Flexibility and discretion	14,37876609	17,2329561
B	*Adhocracy*	**20,67**	**16,02**
	External focus	15,50885114	10,84879384
C	*Market*	**23,36**	**14,72**
	Stability and control	19,99578493	11,5539367
D	*Hierarchy*	**35,82**	**18,36**
	Internal focus	18,1559944	19,08295315
A	*Clan*	**20,01**	**50,91**

4. Organization unity

Average	Currently	5 years ago
A	23	51
B	16	17
C	18	16
D	44	17
TOTAL	100	100

Graphic background

	Results	Currently	5 years ago
	Flexibility and discretion	13,16039983	18,14153658
B	*Adhocracy*	**15,81**	**17,18**
	External focus	11,91275582	11,55089047
C	*Market*	**18,03**	**15,57**
	Stability and control	18,02899648	11,36877452
D	*Hierarchy*	**43,52**	**16,62**
	Internal focus	21,04904005	17,69631545
A	*Clan*	**22,62**	**50,64**

5. Strategic focus

Average	Currently	5 years ago
A	19	51
B	22	16
C	17	15
D	42	18
TOTAL	100	100

Graphic background

	Results	Currently	5 years ago
	Flexibility and discretion	14,45716531	16,99345469
B	*Adhocracy*	**21,66**	**15,72**
	External focus	13,65422471	10,88105744
C	*Market*	**17,42**	**15,07**
	Stability and control	17,35690018	11,65861168
D	*Hierarchy*	**41,54**	**18,20**
	Internal focus	18,67538443	18,96926342
A	*Clan*	**19,36**	**51,00**

6. Success criteria

Average	Currently	5 years ago
A	20	51
B	16	16
C	17	17
D	47	15
TOTAL	100	100

Graphic background

	Results	Currently	5 years ago
	Flexibility and discretion	12,43778942	17,35950085
B	*Adhocracy*	**15,98**	**16,14**
	External focus	11,68873572	11,83489176
C	*Market*	**17,12**	**17,38**
	Stability and control	17,78500944	11,47122039
D	*Hierarchy*	**47,38**	**15,21**
	Internal focus	19,57912128	16,58811872
A	*Clan*	**19,56**	**51,26**

Total

Average	Currently	5 years ago
A	21	49
B	18	17
C	18	17
D	43	17
TOTAL	100	100

Graphic background

	Results	Currently	5 years ago
	Flexibility and discretion	13,75766639	17,62076116
B	*Adhocracy*	**17,98**	**16,73**
	External focus	12,75313784	12,01207337
C	*Market*	**18,09**	**17,25**
	Stability and control	17,97225697	12,18579045
D	*Hierarchy*	**42,71**	**17,21**
	Internal focus	20,03366248	17,9971168
A	*Clan*	**21,20**	**48,82**

Source: research conducted by authors

Table 2 presents the dominant types of organizational culture in the hotel and catering companies in Montenegro. Table 2 also represents the hotel characterization from the point of view of organizational culture change 5 years ago and now, in the following order of issues: dominant organizational characteristics, organizational leadership, employee management, organizational unity, strategic focus and success criteria.

Diagram of 2 dominant types of organizational culture in hotel and catering companies in Montenegro

Source: author's research, diagram generated from Table 2
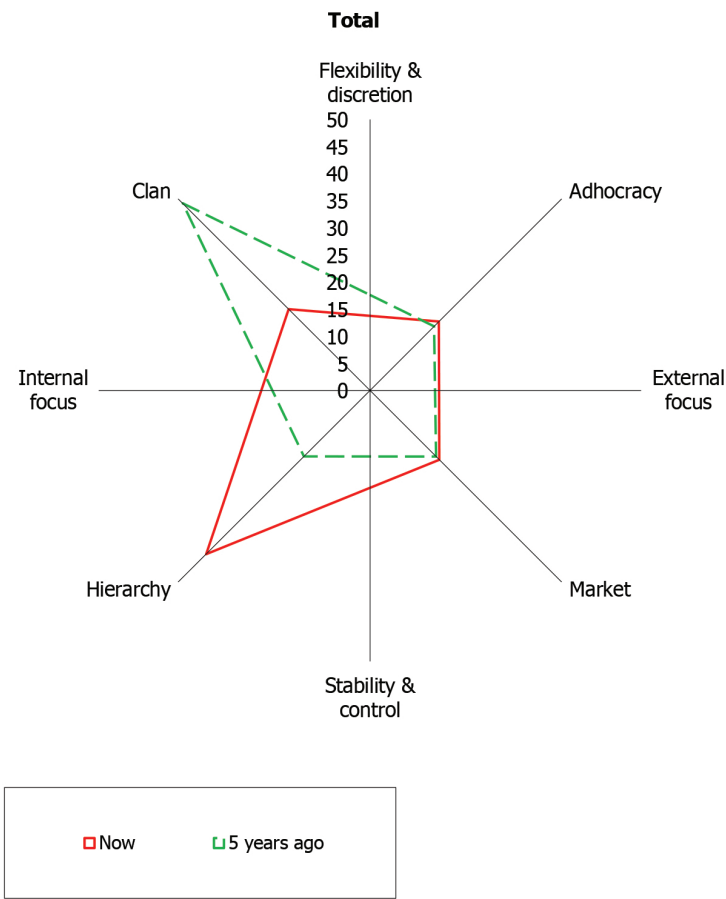
From Table 2 we can see that the largest number of organizations five years ago had the organizational culture of the clan and the equal distribution of other types of organizational culture, while the current situation shows a change in organizational cultures in hotel and catering companies in Montenegro. The dominant type of organizational culture is now the culture of the hierarchy, followed by the culture of the clan, while the representation of the culture of adhocracy and the market is approximately equal.

From the empirical research we can conclude that the dominant type of organizational culture five years ago in hotels was clan culture. Clan culture is by definition characterized by tradition, loyalty, teamwork, personal commitment and close interpersonal relationships. That is why this culture, despite the obvious deviations in domestic practice, is most similar to the company culture inherited from the period of socialist self-management, in which workers, though often only formally, had the right to ask and decide on all important matters related to the business of the enterprise.

Montenegro's tourism economy has maintained a pattern of assumptions, attitudes, values, norms and behaviors from the period of socialist self-management, until the entry of global hotel brands. Whether because we are characterized as typical "Balkan firms" or because of the influence of national culture on organizational culture, whatever the reason, the results show that they have kept the old interpretative scheme until the tourism companies were taken over by larger, organized and formalized companies, or have fallen into the hands of private entrepreneurs, driven primarily by the desire to maximize profits. The obtained results confirm the previous literature that changes are a necessity for the growth and development of each enterprise, and as Deery and Shaw (1999, 387–400) state the survival and development of an enterprise in such conditions depends primarily on the ability to continuously monitor changes in the environment, and on adequate adaptation to those changes. The results of our research confirm that in this context, organizational culture is a particularly important element of a company's ability to change and adapt to changes in the environment.

Based on the conducted research, we can conclude that the dominant type of organizational culture in the current conditions of business in hotels in Montenegro is the culture of the hierarchy. The culture of the hierarchy is characterized by strictly formalized rules and procedures aimed at maximizing efficiency. Adherence to the best practices, controlled processes and constant monitoring is considered essential for productivity and success here. An organization with this culture is a formalized and structured place, while people are united by adherence to the same rules and procedures (De Witte & Van Muijen 1999, 497–502) formalization and efficiency characterize this organizational culture as an ideal.

Such significant changes that have occurred as a result of the privatization process, the entry of global brands and changes in ownership structure, with a dominant share of foreign capital, have led to a change in the organizational culture within the hotel and catering companies in Montenegro. These organizational changes will significantly shape new assumptions and values, that is, lead to the transition to a new model of organizational culture.

With the entry of world brands in the Montenegrin market, standards that are very strict and structuredhave been adopted, with the priority being given to the formalization of the process, and the seek to improve the quality of services in the tourism and hospitality industry, in order to create a high quality tourism product and to improve the competitive position of Montenegro as a tourist destination.

The presence of global hotel brands raises the country and destination ratings, but on the other hand, it also brings about a change in the way of doing business. First of all, there is the change in the assumptions, values, norms and attitudes on which the business of hotel and catering organizations used to rest. That further leads to changes in employee's behavior and changes in organizational practices of the past, in other words, changes in organizational culture in hotel and catering companies in Montenegro.

The obtained results confirm Hofstede's (2001, 9) dimension of national culture, that organizational behavior is clearly influenced by the cultural patterns that employees bring to the organization from their home cultures. With the entrance of world hotel brands, a part of their national culture is implemented on the organizational culture in the hotels in Montenegro, because the employees introduce patterns of thinking, feelings and behavior from their national culture into the organization.

Multinational hotel corporations, which are now present in the tourist market of Montenegro, and which operate according to the principles of the franchise and the brand they represent, have brought significant changes and new value systems in the organizational culture of Montenegrin hotels.

The need for more sophisticated services brings standards that are very strict and structured, and a clear hierarchy of process formalization, aimed at maximizing business efficiency.

Based on the conducted research, we can conclude that the hypothesis with which we started the paper was proved, that there was a change of organizational culture in hotels in Montenegro, from the culture of the clan to the culture of the hierarchy, which is an important factor for achieving competitive advantage and strengthening the position of tourism enterprises in the market.

CONCLUSION

All the influences that an organization is exposed to over the course of its lifetime, whether coming from the outside or from the inside, also reflect on its culture, exposing it to minor or major changes. While organizational cultures often evolve in predictable ways (Quinn and Rohrbaugh 1983, 363), organizations themselves face the need to change culture under the influence

of many factors: significantly changed business conditions, mergers with another organization, changes in ownership structure, new market opportunities, the need to implement a specific type of strategic or structural change, etc. Without adequate change in organizational culture, most initiatives for organizational change such as reduction of employees, transition to a new organizational structure, change of business strategy, etc. will not meet desired expectations (Cameron 1997, 4). Only through change can an organizational culture be shaped that leads to better performance of the company.

The conducted empirical research confirms and precedes the theoretical findings we have obtained by reviewing the relevant literature. It points to the fact that organizational culture is changing hard and slowly, but it is changing both spontaneously and plannedly and consciously.The process of changing organizational culture is most often realized by simultaneously weakening or eliminating some of the existing assumptions, values, norms or attitudes and incorporating new values into the existing system, but also by modifying existing cultural values (Janićijević 2013, 347). In order for organizational culture to change, it is necessary for members of the organization to abandon certain elements of cognitive content they have created about the existing organizational culture, which have become an obstacle to desired organizational change (Janićijević 2013, 483).

Organizational culture represents a significant part of the overall supply and quality offered to hotel guests. Guests recognize this on the basis of which they make the decision to stay at a given hotel, which means that organizational culture directly influences the success of the organization. In spite of the difficult, crisis times that have been prevailing in recent years and affecting all activities, especially in tourism, the employees are the supporting pillar on which the entire range of products and services is built.

According to the changed business conditions, the takeover of hotels by more organized and structured companies, it was logical to lead to the change of previous assumptions, beliefs, values, norms and attitudes that the

employees have built through the organizational practice, in other words what makes its organizational culture.

The conducted empirical research showed that there was a change in organizational culture in the hotels in Montenegro, organizational culture has transformed itself from the clan organizational culture into the organizational culture of the hierarchy, which confirmed the hypothesis we tested in this paper.

We see the contribution of this research in creating a knowledge base that could provide interested investors in the tourism sector with a detailed insight into the specific organizational culture in Montenegro's hotels.

From a practical point of view, identifying a correlation between practice and perceived organizational culture change can help tourism businesses identify their culture and identify potential options for organizational change.

Regarding the limitations of the research, the complete research was based on the examination of employees and their subjective assessments of the situation five years ago and now. Additionally, no current categorization by job and hierarchy, as well as categorization by change dynamics for each region individually, has been performed in the study, and for future work, we propose an analysis by job category and regionalization, which can certainly influence the perception of the situation and change.In addition, to complete this topic, the research should include identification of the factors that led to the change in organizational culture, since the current research is based on the assumption that the transition process led to change.

For future research, it is proposed to create a model that will quantitatively and qualitatively describe and measure change, which in turn would provide significant support in monitoring and managing the change itself.

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Rezime:

Organizaciona kultura je tema kojoj se u naučnoj literaturi pridaje veoma velika pažnja. Svi uticaji kojima je organizacija u toku svog životnog vijeka izložena, bilo da dolaze spolja ili iznutra, odražavaju se i na njenu kulturu, izlažući je manjim ili većim promjenama.

Za primarni cilj istraživanja postavili smo utvrđivanje karaktera dominantnih modela organizacione kulture u sektoru turizma i ugostiteljstva Crne Gore, kao i dinamike promjena organizacione kulture u razmatranom periodu istraživanja.

Metode istraživanja: za potrebe istraživanja korišćen je slučajni uzorak. Od istraživačkih tehnika primjenili smo tehniku anketiranja, a u okviru navedene tehnike koristili anketni upitnik, tačnije modifikovani Kameronov i Kvinov upitnik (OCAI) za dijagnozu organizacione kulture. Upitnik je modifikovan kako bi došli do informacije o promjenama kulture koje su se desile u prošlosti.

Rezultati istraživanja ukazuju da je najveći broj hotelsko-ugostitaljskih preduzeća u Crnoj Gori, prije 5 godina imao organizacionu kulturu klana, dok trenutno stanje pokazuje da je današnja organizaciona kultura u hotelsko-ugostiteljskim preduzećima u Crnoj Gori, kultura hijerarhije.

Smatramo da će ovo istraživanja moći da ponudi osnovu za sagledavanje tipova organizacine kulture u hotelsko-ugostiteljskim preduzećima u Crnoj Gori. Što doprinosi kreiranju znanja koje mogu da koriste menadžeri turističkih preduzeća u Crnoj Gori i time postignu konkurentsku prednost i bolje performanse poslovanja.

THE INFLUENCE OF ORGANIZATIONAL CULTURE ON ORGANIZATIONAL EFFICIENCY

Part II

THE IMPACT OF DIGITALIZATION ON ORGANIZATIONAL CULTURE

AGILE ORGANIZATIONS IN THE DIGITAL STRATEGY IMPERATIVES IMPLEMENTATION - EVIDENCE FROM SERBIA

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Abstract: This paper aims to answer questions around digital strategy development in organizations providing clarity, specifically to leaders and ICT departments, the role of human resource and process innovation in the digital strategy implementation. It includes the lessons learned from 256 SMEs from Serbia as business representatives, their attitudes given on the topic of the research in the experimental research provided in 2020 in Serbia. In the focus of the paper is the financial industry sector with insurance and accounting services. The authors of the paper explored the impact of the four variables: leadership,

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ICT, business processes and business model as independent, to the digital strategy risks, as dependent variable. Also is explored the possible decision making impact on the digital strategy issues brought by these influences. The hypothesis of the research, that the digital strategy risk of SMEs organizations would be significantly influenced by four other risks, leadership, ICT, business processes and models in further medium term, is confirmed. Descriptive statistical analysis, IPA decision-making methods, Pearson's correlation, with the attitudes of the SME representatives given by the method of Likert's valuation scale are used in the paper. The key results of the research would contribute to better understanding the opportunities and threats of digitizing implementation in the strategy creation, needed investment and the agility of SMEs in these processes.

1. INTRODUCTION

The motivation for the research in the paper is the agility of the organizations to implement a digital strategy, as digitization is fundamentally altering the nature of competition, leadership and organizational strategy.

If SMEs businesses want to evolve with the rapid pace of digital change today, they would have to work to increase efficiency with technology adopting *agile* principles across the business in their digital transformation. Cus-

tomer expectations are very different, researching much more online before purchasing, the high-end IT solutions delivering cost is reducing all the time (according to Galanteet al al. 2013; Willmott 2014). Over 10 percent of customers in the UK in 2020 will shop online and actually make the purchase, in banking it's over 30 percent).

Digitization is fundamentally altering the nature of competition, blurring the lines between sectors, placing fresh demands on both leadership and organizational strategy. Digital allows different services to be stitched together more quickly and cheaply and the companies can attack specific areas of the value chain rather than having to own the whole thing thinking broadly about whom to collaborate with. A key decision around digital is to understand what, really, is the value from digital and the amount of investment that digital which would be needed for enterprise's digitizing. Many CEOs are choosing to lead the digital transformation themselves in the industries that are being heavily disrupted, being personally involved as the digital impacts many of the different functions at organization. It's very hard to delegate it to one person because, in fact, it impacts most of the organization. In digital transformation in 2020 there can be seen further trends:

- Ongoing digital transformation across industries, with the rapid scaling of these initiatives,
- Rapid adoption of digital operating models, including integrated cross-functional teams,
- A shakeout as those that have invested in big data governance and analytics leapfrog their competitors,
- Better use of a machine learning,
- Continued merger and acquisition activity in the it outsourcing industry,
- Consultancies forming new digital partnerships,
- Expanding public cloud adoption,
- New digital transformation success metrics, and
- More attention to long-term value of digital intiatives

It includes the main role in an organisation of the:

- *Leaders.* Because IT technology plays a critical role in an organization's ability to evolve with the market and continually increase value to customers, CIOs play a key role in digital transformation and the IT leaders and departments. Digital leadership pays off. Not just those leaders in IT – must prioritize their understanding of technology trends. To educate is the CIOs' opportunity, and the payoff can be leading to stronger revenue growth and greater profit margins. The prevalence of legacy technology hinders leaders-CIOs' ability to successfully embark on a digital transformation strategy, in their decisions on spending their budgets on existing IT concerns, and new technologies implementation,
- *Human resource.* Is there a need to design new jobs to help the creation of the framework for digital transformation, or hire a consulting service?
- *Process innovation*/What parts of the business strategy need to change? Is it really worth it? The business mandates behind the term to rethink old operating models, to experiment more, to become more agile in its ability to respond to customers and rivals – aren't going anywhere.
- *ICT*/ digital technologies and sectors to support the digitalization, to lead the changes and investments.

This paper aims to answer some of the specific questions around digital strategy development in SME organizations providing clarity, specifically to CIOs (leaders) and ICT departments, the role of human resource and process innovation in the digital strategy implementation, including lessons learned from business representative's attitudes, given in the experimental research provided for the purpose of this research. The paper is structured to present the key results of the research in the third part, discussion and the conclusions, and after abstract to give the main literature review of the digitalization and the agility of the organizations together with the references used in the paper.

2. LITERATURE REVIEW

Digital transformation is most often defined as the integration of digital technology into all areas of a business, fundamentally changing its way of operating and delivering value to customers. The change in leadership, different thinking, the encouragement of innovation and new business models, incorporating digitization of assets and an increased use of technology to improve the experience of your organization's employees, customers, suppliers, partners and stakeholders is the imperative of this new phase of industry revolution. Often definitions touch on how the effects of the digital transformation extends beyond businesses to society as a whole. Leaders, think about what digital transformation will mean – in practice - to the company.

The ***digital strategy of the organization*** determines that are used resources of the organization to achieve the goals by implementing digital transformation. There are common strategies to implement digital transformation, i.e. ICT technology use, business process change, structural change, and financial aspect. The strategies that can act as digital transformation framework are often in further steps: The first allows the organization to apply technology in order to facilitate the business process; The second strategy allows to apply technology in order to change the organization business process, The third strategy allows to change the organization structure due to impact of applying digital activities, and the final strategy most often allows to affect the financial of organization. Main benefits of digital transformation through digital strategy of the SMES' organization for business are: increase customer satisfaction and experience, improvement in productivity, cost reduction and increase revenue from products and services

There are many different paths to enterprise ***agility***. Some organizations are born agile, as they use an agile operating model from the start and are common in the technology sector. Most other organization experience varies types of journeys to agile and must undergo a transformation to embrace enterprise agility, like: all-in, which entails an organization-wide commitment to go agile and

a series of waves of agile transformation; step-wise, which involves a systematic and more discreet approach; and emergent, which represents essentially a bottom up approach, digital transformation vary in pace, scope, and approach, but all contain a set of common elements across two broad stages. A comprehensive transformation touches every facet of the SMES' organization, including people, process, strategy, structure, and technology.

Structure:
- Workforce size and model: take mission-oriented approach to workforce sizing and location,
- Reporting structure: simplify and delayer your reporting structure,
- Role and responsibilities: build roles and responsibilities up from the businesses and limit HQ to the minimum necessary to run the businesses,
- Governance: streamline decision making on digital strategy.

ICT technology:
- Supporting systems and tools: ensure the enterprise has the right tools to support an agile way of working,
- Architecture evolution: enable the design and evolution of architecture based on requirements,
- Delivery pipeline: automate testing and integration processes to enable fast and continuous delivery,
- IT infrastructure and operations: ensure people in the organization to have the appropriate infrastructure and operations to support rapid changes.

Processes &People:
- Train managers to provide vision, inspire, model, and coach rather than direct,
- Talent management: to be ready to attract and retain the best talent,
- Informal networks and communication: create opportunities for employees to form organic networks across the organization,
- Team processes: free up a team's time to work on value-creating activities,
- Linkage mechanisms: create means for resources from different functions to collaborate,
- Planning and decision processes: recognize that even the best plans can fail, and design planning and decision making to rapidly test and learn, and
- Performance management: structure performance management based on outcomes.

As the characteristics of an agile organization in the digital strategy implementation can be seen thorugh the structure or model, people, ICT technology and processes, the hypothesis and the variables of the research in this paper are defined on that basis. *Hypothesis* of the research is that SMEs organisation's digital strategy implementation is impacted by the governance and leadership, ICT technologies, processes and the business model (Figure 1).

Figure 1: Research Hypothesis
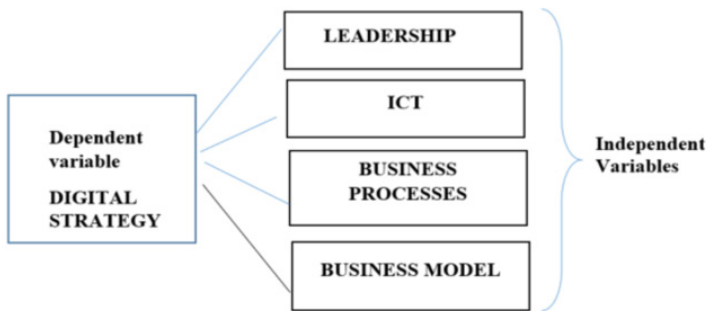
Source: Authors' definition

Independent variables in the research are defined as:

1. *Governance/Leadership* is one of the application areas of digital transformation. Good governance (Al-Ruithe, Benkhelifa & Hameed 2018; Al-Ruithe & Benkhelifa 2018) schedule and leadership agility requires a brief description and a well-organized structure to reach the goals and objectives of the organization business process (Duarte 2015). The objective of company should be achieved and performed the organizational processes effectively and efficiently without changed, and ignored for the benefit of individuals is the governance principle (Christensen 2016). On the other hand, digital governance and leadership are a basic structure or guideline in order to develop accountability, make decisions and roles of authority for an organization's in the occurrence of digital strategy. In the broader sense, it includes the workers with the skills (Sousa & Rocha 2018; Korhonen & Halen 2017) and

eEducation (Betz, Olagunju & Paulson 2016) as an individual ability to use technology (i.e. IoT, cloud computing, big data) in order to implement digital transformation on the organization. Also includes a customer and partner approaches, meaning the change of the people or stakeholder to new strategies and new culture (Demirkan, Spohrer & Welser 2016; Hafsi 2016).

2. *ICT business activities or functions.* IT digital platform enables to collaborate work, ideas, and technologies of organizations with external environment. Digital Platform (Hossain & Lassen 2017), digital transformation depends of the level of applyed new ICT technological opportunities in order to produce value and enhancing competitive advantage for the organizations (Fayad, Sanchez, Hegde, Basia & Vakil 2014; Gebhart, Giessler & Abeck 2016). Sometimes, such kind of transformation has influences on the structure, the main resources, and Business Activities/Functions (Sieben, Gregory& Hanelt 2015; Kahn & Weiner 1967; Ebert 2015).

3. *Business processes/operations* focus on one or more related activities functions and operations in order to accomplish business goal of the organizations (Sathananthan, Hoetker, Gamrad, Katterbach & Myrzik 2017; Lederer, Betz & Schmidt 2018; Ebert & Duarte 2018).

4. *Business model* /innovation of the organization focuses on getting the value of business by transform core business (traditional core business) to create or link ICT technologies based on effectively business strategies. (Dengler & Matthes 2018).

3. METHODS AND MATERIALS

3.1. Sampling

A total of 256 respondents, representatives of enterprises completed the survey, which has been conducted on the whole territory of Serbia in 2020. The most representative legal form of the company was privately independent enterprise 172 (SMEs), or 67.18% of the total number of companies.

The most pre-representative age of the company is from 6 to 10 years in business, 104 or 40.63% of the total number of companies. SMEs are from the financial and insurance industry sector 79.68 %, and from financial services as accounting agencies services. The most over-representation is organizations with income of 500,001 to 2,000,000 Euros. 66.78% of all respondents were in general management. The frequency size and percentage share of the sample are given in Table 1.

Table 1. The sample frequencies and percentage share

Description		No.		%	
Legal form	Privately independent enterprise	172	256	67.18	100%
	Public undertaking	52		20.31	
	Part of a large system	20		7.81	
	Foreign company	12		4.68	
Year in business	From 1 to 5 years	72	256	28.13	100%
	From 6 to 10 years old	104		40.63	
	Over 11 years	80		31.25	
Activities	Financial % insurance services	204	256	79.68	100%
	Accounting services	52		20.32	
Income of a company	Less than €50,000	24	256	9.37	100%
	From €50,001 to €500,000	60		23.43	
	From €500,001 to €2,000,000	144		56.25	
	Over €2,000,001	28		10.93	
Function of the respondent	Owner	125	256	48.82	100%
	Engineer	64		25.00	
	Manager	46		17.96	
	Worker	21		8.20	

3.2. Methodology

Methods of statistical deskription and IPA decision-making methods were used in the research. The IPA matrix per (Martilla & James 1977) displays mean significance (importance) and performance (satisfaction - performance) elements of the model, where the y-axis represents the value of significance and the x-axis value of performance. The matrix of significance and performance consists of four quadrants (Figure 2):

– Quadrant 1 demonstrates the elements or criteria that have great significance, but offer a low degree of satisfaction. The elements that fall into this quadrant are categorized as "Concentrate Here".
– Quadrant 2 demonstrates the criteria elements that have great significance and provide great satisfaction. The elements contained in this quadrant are categorized as "Keep up the Good Work".
– Quadrant 3 shows elements or criteria elements that have little significance and provide a low degree of satisfaction. The elements in this quadrant are categorized as "Low Priority".
– Quadrant 4 presents elements or criteria elements that have little significance, but provide great satisfaction. Elements of this quadrant are categorized as "Possible Overkill".

Figure 2. Significancity and performance analysis
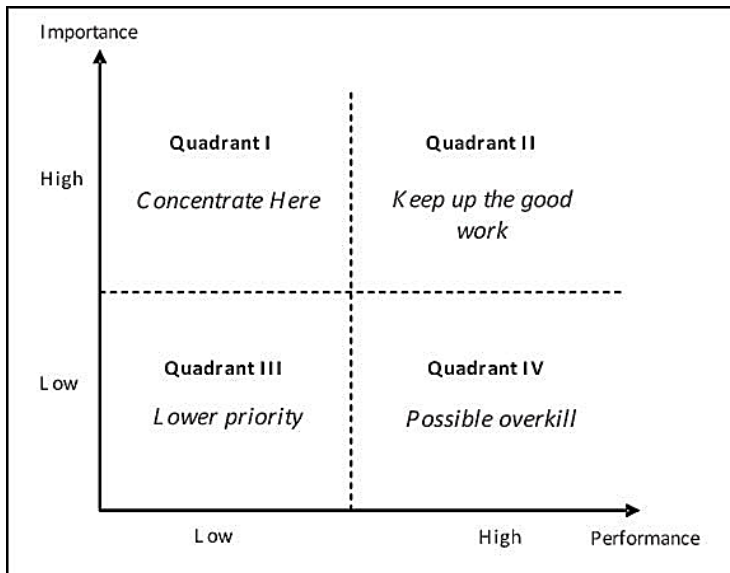
Source: According to Martilla & James 1977.

Using the IPA matrix, managers, leaders and engineers from 256 SMES organizations gave their assessments for the significance of the four variables for the company's digital strategy implementation. Attitudes are given by the method of Likert's valuation scale: 1 to 5 (where with 1 is marked insufficient influence, and with 5 excellent influences).

Independent variables are set out as:

1. Governance/Leadership (abbr. as G/L),
2. New ICT technologies (abbr. as ICT),
3. Business model/innovation (abbr. as BM),
4. Business processes (abbr. as BP),

And dependent variable is set out as:

1. Digital Strategy (abbr. as DS).

3.3. Key results

The descriptive statistics of respondents, mean, standard deviation, standard mean error, and sample number for performance and criteria significance (ICT, G/L, BM, and BP are presented in Table 2. The highest average performance score is given to BP 4.1523438, followed by ICT criteria 3.84375, and criteria G/L, 3.828125 and the lowest is BM criteria, with the score of 3.78125.

The highest average score for significance is given to ICT 4.1015625, followed by criteria BP with 3.84375, and criteria G/L with 3.75 and the lowest criteria is given to BM, 3.46875.

Table 2. Desscriptive statistics for performance and the significance of variables

	ICT(P)	G/L.(P)	BM(P)	MP(P)	ICT(I)	G/L.(P)	BM(P)	MP(P)
Mean	4.09375	3.828125	3.78125	4.1523438	4.1015625	3.75	3.46875	3.84375
Std Dev	0.8534819	1.0708939	1.0548673	0.8332751	0.852584	1.017494	1.1197864	0.9240788
Std Err Mean	0.0533426	0.0669309	0.0659292	0.0520797	0.0532865	0.0635934	0.0699866	0.0577549
N	256							

The IPA results are displayed in Table 3. The average performance score is 3.9638672, and the average score for significance is 3.7910156. Both of these average scores were used as the basis for determining: the performance of each criterion/variable as "good" or "bad" and the significance of each criterion/variable as "high" or "low" (Table 3).

Table 3. Performance and significance analysis for criteria/variables

No.	Criteria	Performance	Significance	Digital strategy
1.	ICT	4.09375	4.1015625	„Keep up the Good Work"
2.	G/L	3.828125	3.75	„Low Priority"
3.	BM	3.78125	3.46875	„Low Priority"
4.	BP	4.1523438	3.84375	„Keep up the Good Work"
Medium value		3.9638672	3.7910156	/

Performance criterion significant management strategies are:

1. ICT 4.09375 4.1015625 "Keep up the good work"
2. G/L 3.828125 3.75 "Low Priority - Low Priority"
3. BM 3.78125 3.46875 "Low Priority – Low Priority"
4. BP 4.1523438 3.84375 "Keep up the good work".

Median value is 3.9638672 3.7910156.

Criteria / variables BP and ICT are of great importance and provide high performance, it belongs to quadrant 2 - "Keep up the Good Work". The BM and G / L criteria are of little importance, but also provide a low level of performance, belonging to quadrant 3 - "Low Priority". It can be concluded from the IPA matrix (Figure 3) that respondents give: great attention to the significance for the BP and ICT criteria, and little importance for the BM and G/L criteria, high importance for the degree of performance for the BP and ICT criteria, and low BM and G / L criteria (Figure 3).

Figure 3. IPA matrics
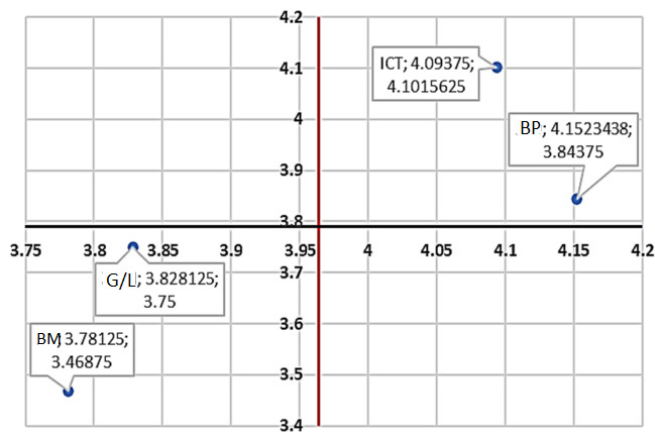
In Table 4 are given the values of the Pearson's correlation.

Table 4. Correlation of the model
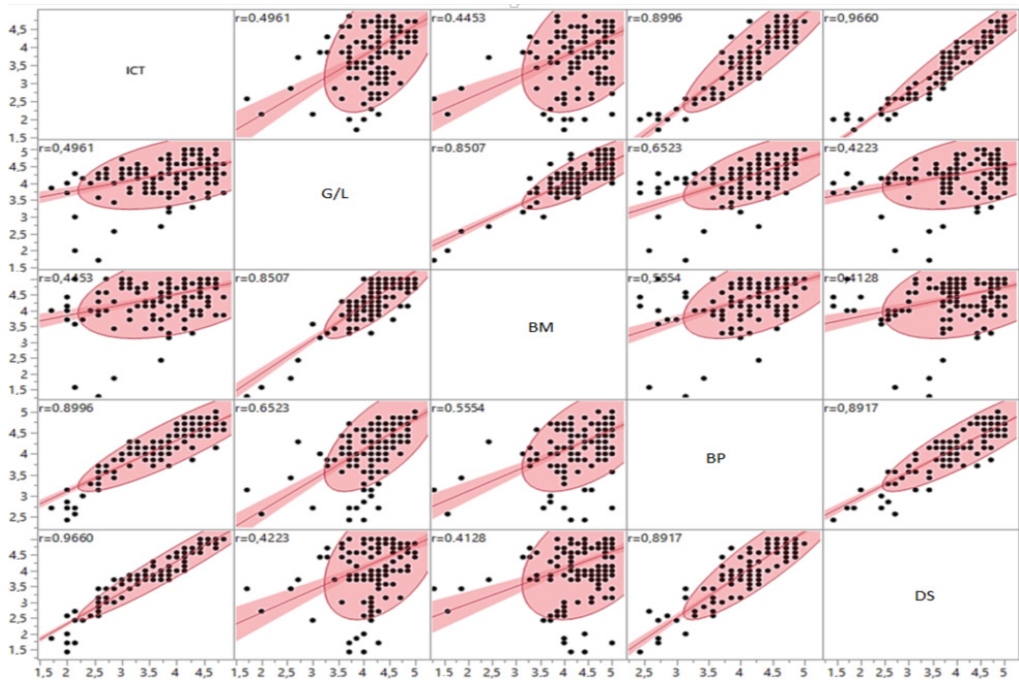
The given correlation model confirms the highest correlation coefficient between the variables ICT and DS of 0.9660 and it is strong, and DS prediction by the variable ICT with 93.31%. It also confirms the lowest correlation coefficient between the variables BM and DS of 0.4128 relatively weak, and the prediction of the variable DS in relation to the variable BM with 17.04%.

In Table 5 the basic evaluation of the model is performed. The coefficient of multiple determinations is 0.952873, which means that with 95.28% variability can be explained the dependent variable DS by independent variables: ICT, G/L, BM i BP. The correlation of the variables is strong.

Table 5. Model evaluation for the DS variable

RSquare	0.952873
RSquare Adj	0.952122
Root Mean Square Error	0.169971
Mean of Response	4.351004
Observations (or Sum Wgts)	256

The assessment of statistical significance is given in Table 6, and it is [F (4,251) = 1268,747, p <0.0001].

Table 6. ANOVA for variable DS

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	4	146.61651	36.6541	1268.747
Error	251	7.25140	0.0289	Prob > F
C. Total	255	153.86790		<.0001*

In Table 7 the magnitude of the contribution of independent variables to the dependent variable DS is determined. The highest contribution has the independent variable ICT and it is 76.95%, the lowest contribution has the independent variable BM and it is 12.86%. Based on these data, the **set hypothesis H0 can be confirmed: The levels of ICT, G / L, BM and BP, affect the level of DS implementation.**

Table 7. Contribution coefficients for the DS variable

Term	Estimate	Std Error	t Ratio	Prob>|t|	Std Beta	VIF
Intercept	0.3335324	0.115506	2.89	0.0042*	0	.
ICT	0.7871708	0.033554	23.46	<.0001*	0.769517	5.7305097
G/L	-0.449916	0.050114	-8.98	<.0001*	-0.26537	4.6534145
BM	0.1719391	0.035012	4.91	<.0001*	0.12869	3.6574664
BP	0,.459419	0.057265	8.02	<.0001*	0.30106	7.5001622

Based on the data from the previous table, a multiple regression equation can be formed (formulas 1 and 2), which reads:

$$y=0.3335324+0.7871708 \cdot x_1-0.449916 \cdot x_2+0.1719391 \cdot x_3+0.459419 \cdot x_4 \qquad (1)$$

or

$$DS=0.3335324+0.7871708 \cdot ICT-0.449916 \cdot G/L+0.1719391 \cdot BM+0.459419 \cdot BP \quad (2)$$

Figure 4 shows the derived multiple regression equation for the DS variable.

Figure 4. Multiple regression equation diagrams for the DS variable

DS Predicted RMSE=0.17 RSq=0,95 PValue<.0001
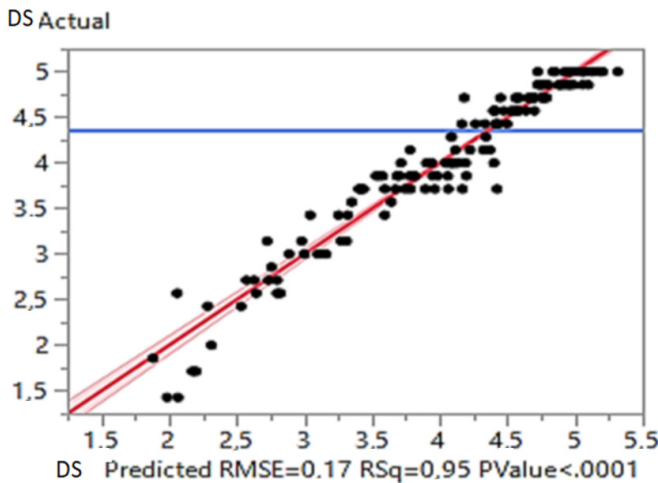
4. CONCLUSIONS

How companies are evolving their businesses through the use of ICT technologies, new business models and processes to drive revenue and innovate at the point of the customer is vey actual question of many SME organizations today. Digital business is described as the creation of new business of the SMEs from the financial sector, which were included in the empirical research for the purpose of this paper, designs by blurring the digital and physical worlds.

The use of 3rd platform technologies to create value and competitive advantage through new offerings, new business models, and new relationships is the main interest of the research and their impact on the digital strategy. The research interest is based on many predictions in the field of digital transformation as it would be made by connected devices with the number of connected IoT endpoints set to top 30 billion in 2020 and reach 80 billion by 2025 in some current predictions. But for most enterprises, the transition

to a digital-first business model has also been more cautious. The motivation for this paper was the main question of the digital strategy creation, and the factors of risks influencing that process.

A lot of organizations have already started integrating and executing a digital-first approach, but very little already is in Serbia an enterprise-wide digital business. Many companies are in the very early stages of becoming a digital business – either gathering information or just beginning to formulate a digital-first strategy, with the biggest obstacles in achieving success with digital business initiatives - lack of staff and/or correct skill sets, cultural issues, governance agility, and luck of sufficient budget.

The research in this paper finds that both technology and organizational change management must be considered equally, enabling worker productivity through tools such as mobile, data access and AI-assisted processes, and the ability to better manage business performance through data availability and visibility.

ICT decision-makers have very strong impact on the digital strategy of the researched enterprise creation, as beside involvement of the new ICT technologies in the p business processes of the enterprise, have to meet customer experience expectations understanding customer needs through data collection and analysis, providing secure, optimized anywhere/anytime access to assets. That means, by digitally modifying business and   processes, developing new digital business revenue streams, and achieving top-line growth through digital product enhancements, new digital products or services. For some of companies surveyed, it means also to improve their foreign market entrance, digital globalization – the flow of data and information worldwide which enables the movement of goods, services, finance and people. All of these objectives require a smart combination of technologies, both proven and some in their very early stages, to achieve their intended results.

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POKRETNE ORGANIZACIJE U SPROVOĐENJU DIGITALNE STRATEGIJE - PRIMER SRBIJE

Rezime:

Cilj ovog rada je da odgovori na pitanja vezana za razvoj digitalne strategije u organizacijama pružajući ih na što jasniji način, posebno o rukovodiocima i IKT odeljenjima, o ulozi ljudskih resursa i inovacija procesa u primeni digitalne strategije. Rad uključuje lekcije i stavove 256 predstavnika malih i srednjih preduzeća na ovu temu dobijenih u

empirijskom istraživanju sprovedenom u Srbiji u 2020. godini na temu ovog rada. U fokusu rada su preduzeća iz sektora finansija sa uslugama osiguranja i računovodstva. Autori rada istraživali su uticaj četiri promenljive: liderstva, IKT-a, poslovnih procesa i poslovnih modela na rizike digitalne strategije, kao zavisne varijable istraživanja. Takođe su istraženi mogući uticaji donošenja odluka na pitanja digitalne strategije preduzeća koje oni donose. Potvrđena je hipoteza istraživanja da ćena rizike digitalne strategije organizacija MSP u narednom srednjeoročnom periodu značajno uticati četiri druga definisana rizika: liderstva, IKT, poslovnih procesa i modela. U radu se koriste deskriptivna statistička analiza i metode odlučivanja IPA, kao i Likertova skala vrednovanja stavova ispitanika. Ključni rezultati istraživanja doprineće i boljem razumevanju mogućnosti i ograničenja primene digitalizacije u formulisanju strategije preduzeća, veličine ulaganja i brzine, te agilnosti delovanja MSP u tim procesima.

DIGITAL CULTURE IMPACT THE SMES ORGANIZATION BUSINESS OUTCOMES

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Abstract:

As the values of digital culture of an organization should be actionable, distinctive, and linked to results, the aim of the research was to show that the impact of the digital culture on the organizational success through its outcome can encourage persistent striving for customer-focused, scalable results. To that purpose there was experimental online research provided in 114 SMEs in Serbia in 2019. Methods used are descriptive statistics, ANOVA test and Pearson's correlation. Key results support the hypothesis of the paper that the Digital culture with its values, impact, speed, autonomy and openness influences the output of the organization measured through the impact on its factors, agility, collaboration, customer focus, diversity, execution, innovation, and integrity, fast-growing and financial performance. The authors hope that such a system of interrelated values and digitally enabled practices can be remarkably effective when management of the organization gets it right. The realities of how companies talk about

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their culture is consistent with a prominent theory that defines organizational culture as a set of norms and values that are widely shared and strongly held throughout the organizational output, quality, productivity and safety improvement. The contribution of the paper is the research of the core values of the digital culture in direction to capture the values to the distinctive essence of an organization, providing the clearly link to business outcomes.

Keywords: organizational behavior, digital culture, transformation, change management, data & analytics, communication, innovation, SMEs.

JEL: D23, 033

1. INTRODUCTION

Many companies around the world are growing their digital cultures within the technology and business transformation. Launching technology projects is just the starting point. To move from building systems and processes to building capabilities is the main goal, building a culture where innovation is the norm and where employees constantly seek learning making the most of the best new technologies and growth (Westerman, Bonnet & McAfee 2014; Winter 2017; Wojcicki 2014; Dweck 2007).

The right culture for the digital age matches the speed and innovative nature of digital-native companies while avoiding the locker-room culture that can prevail at some of them. It promotes rapid experimentation with products and business models while staying true to valuable capabilities that help the company thrive. Culture is a core executive responsibility. It takes continuous performance management at all levels, the commitment of everyone across the company to live by the culture the organization wants to achieve.

There are number of good examples in the organizational culture improvement, among which is very popular, "The Culture 500". This is an in-

teractive index, used in USA companies. shows' how companies perform across the cultural values that matter most to employees, such as respect, collaboration, and diversity (Guiso, Sapienza & Zingales 2015). Culture Champions are likely to share the strong financial performance compared with companies in their industries, female leadership (Chatman &. O'Reilly 2016; Verbeke, Volgering & Hessels 1998; O'Reilly & Chatman 1996), psychologically safe environments. Company practices often conflict with corporate values. Closing the gap starts with communication. (O'Reilly, Chatman, & Caldwell 1991; O'Reilly, Caldwell & Chatman 2014).

All that is good in a traditional company's culture makes a good base for a digital-ready culture development, as new practices while fine-tuning others, communicating the desired values. A digital-ready culture can be a winning formula for competing with fast-moving digital entrants in any industry in the combination with a traditional company's assets and competencies (Zakic, Popović & Miškić 2019; Radovic-Markovic, Grozdanic, Kvrgic & Markovic 2012; Radovic-Markovic, Jevtic, Grozdanic, Markovic & Vucekovic 2014; Radovic-Markovic, Grozdanic & Jevtic 2014b).

All this activities and trends motivated the authors to research the issues of the digital culture and their impact on the business outcomes of an organization. The paper is structured so that, after the abstract, introduction and literature framework, the key results of the research are presented with discussion and conclusions. The newest sources of literature are used in the research and presented at the end of the paper.

2. LITERATURE REVIEW

A definitions *of the digital culture often include* a set of values and norms that guides human and technology interactions. It's present in the espoused values of management, the unspoken assumptions of employees, new ICT technologies implementation and the commonly accepted behaviours that

have helped an organization succeed in its chosen environment. It assumes the set of cultural elements that are essential to help companies become *agile, innovative, and fast-growing*.

According to the review of the management literature on digital culture, examined published frameworks and stories of digital companies' cultures, and the identification a small set of self-consistent values and practices of digital culture, digital leaders of the organization typically focus on has further key values:

- *Impact:* radically changing the world through constant innovation. Creating impact, assuming that profit will follow,
- *Speed:* helping organizations stay ahead of competitors and keep up with rapidly changing customer desires by moving fast and iterate,
- *Openness*: Share advice and information openly engaging broadly with diverse sources of information rather than keeping knowledge to oneself and striving for *big impact*. The companies encourage people to seek out relevant data and expertise wherever it resides, and
- *Autonomy*: *Autonomy* means not relying on formally structured coordination and policies, but giving the freedom to do what's right for the organization and its customers without waiting for formal approval at every turn. The workers have the latitude to focus on the tasks that they believe matter most to customers.

High-performing digital companies most often define their values as:

- Rapid experimentation,
- Self-organization,
- Data-driven decision-making, and
- Obsession with customers and results.

The emphasis on data and results drives:

- Accountability,
- Encouraging persistent striving for customer-focused, and
- Scalable results.

Many companies around the world are growing their digital cultures. (Helsper & Eynon 2010; Grozdanic Grozdanic, Radovic-Markovic, Papic, Kvrgic & Jevtic 2012; Grozdanic, Radovic-Markovic, Jevtic, & Vukosavljevic 2013; Grozdanic, Radovic-Markovic & Jevtic 2013b; Popovic, Kvrgic, Corić, Avakumovic & Milosević 2020; Dimitrijevic, Vukadinovic & Grozdanic 2017). While changing culture is never easy, the start growing strong cultural roots for a digital transformation of the organization can help some of the following activities:

– Reformation of the vision around radical impact,
– Visible promotion new values and practices,
– Selective approach in choosing where to start, as not every unit of a company needs a digital culture,
– Paying the attention to ICT,
– Provision of the right tools to make data-driven decisions, or to make collaboration with people around the world easy, and
– Transparency about goals and performance, output, quality, and safety to help collaboration in the problems fixing and productivity raise.

3. METHODS AND MATERIALS

3.1. Sampling and data

The aim of the research was to communicate the impact of the digital couture s values on the company's outcomes. The hypothesis is that the digital culture values have the impressive impact on the factors of the organization s success.

– Based on the theoretical framework (Cameron, **Quinn & DeGraff** 2006; Bennett, Maton & Kervin 2008; Bawden 2008) as the values of the digital culture of the organization are defined: Impact, Speed, Openness and Autonomy. Digital culture with its factors is independent variable in the research,

– Based on the theoretical framework (Aguinis & Lawal 2013; O'Reilly & Chatman 1996) as the organization's outcome success is defined: Agility, Collaboration, Customer focus, Diversity, Execution, Innovation, Integrity, Fast-growing, Financial performance and Respect. Organization's outcome with its factors is treated in the research as dependent variable.

There were 114 SMEs organizations from Serbia in 2019 included in the experimental online questioner for the purpose of the research in this paper. Using descriptive statistics the sample can be presented as follows:

In Figure 1 are given descriptive statistics for the main industry activity of the companies, and they are: manufacturing– 58 organizations, or 50.87% of total number of the interviewed companies, services - 37 or 32.45% and ICT sector - 19 or 16.66% of the total number 114 SMEs.

Figure 1. Frequencies and percentage representation of the main activity of the company
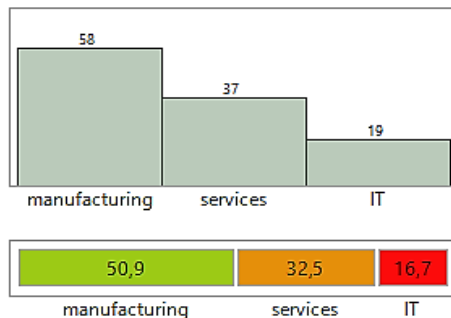
According to the legal form, all 114 companies or 100% belong to independent private enterprises. According to the number of employees, all 114 companies, or 100% belong to a group of small and medium enterprises of 10 to 250 employees.

In Figure 2 basic desscriptive survey statistics according to the position of the surveyed companies, owner - 59 or 51.75% and manager / director - 55 or 48.24% of the total number of 114.

Figure 2. Frequencies and percentage representation according to the position of the respondents
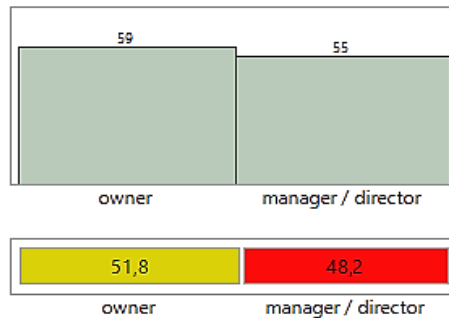
Figures 3 provides basic descriptive statistics for the revenues of the surveyed companies in 2019. Less than €100,000 revenues had 27 companies or 23.68%, from €100,001 to €500,000 - 34 or 29.82%, from 500 001 to €2,000,000 - 28 or 24.56% and over 2,000,001€ revenues had 25 companies or 21.93% of the total number of 114.

Figure 3. Frequencies and percentage representation according to the company's revenue in 2019

	34		
27		28	25
less than 100.000 €	from 100.001 to 500.000 €	from 500.001 to 2.000.000 €	over 2.000.001 €
23,7	29,8	24,6	21,9
less than 100.000 €	from 100.001 to 500.000 €	from 500.001 to 2.000.000 €	over 2.000.001 €
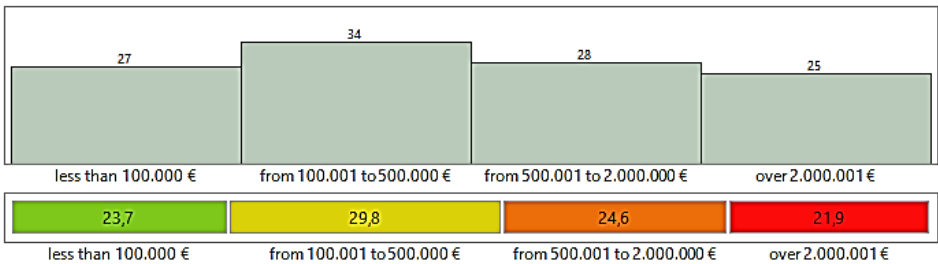
In Table 4 descriptive statistics according to the source of income in the surveyed companies is presented, so 94 companies or 82.45% earned income on domestic market, 20 or 17.54% of the total sample on foreign market.

Table 1. Descriptivne statistics according the Sources of business income in 2019.

Sources of business income	Count	Prob
Domestic market	94	0.82456
Foreign market	20	0.17544
Total	114	1.00000

3.2. Cross-tabulation

In Table 2 are given cross-state values for the Main activity of the company and the Company's revenue in 2019. It can be concluded that there are the most the manufacturing companies with the company's revenue in 2019 from €100,001 to €500,000. At least are companies with the Main IT activities of the company with the company's revenue in 2019 over €2,000,001.

Table 2. Cross-tabulated values for the Main Activity of the Company and the Company's revenue in 2019.

The main activity/ The company's revenue in 2019	Manufacturing			Services			IT			All		
	N	Column %	Row %	N	Column %	Row %	N	Column %	Row %	N	Column %	Row %
Less than 100.000€	7	12.07	25.93	10	27.03	37.04	10	52.63	37.04	27	23.68	100.00
From 100.001 to 500.000€	23	39.66	67.65	9	24.32	26.47	2	10.53	5.88	34	29.82	100.00
From 500.001 to 2.000.000€	13	22.41	46.43	9	24.32	32.14	6	31.58	21.43	28	24.56	100.00
Over 2.000.001€	15	25.86	60.00	9	24.32	36.00	1	5.26	4.00	25	21.93	100.00
All	58	100.00	50.88	37	100.00	32.46	19	100.00	16.67	114	100.00	100.00

In Table 3 are given cross-state values for the Main activity of the company and Sources of business income. It can be concluded that the Main activity of the company are most of those working in manufacturing 50 of them, with domestic market as the Sources of business income. At least are those companies with the Main IT activity and foreign market as the Sources of business income.

Table 3. Cross-tabulated values for the Main activity / Sources of business income of the company

The main activity / Sources of business income	Manufacturing			Services			IT			All		
	N	Column %	Row %	N	Column %	Row %	N	Column %	Row %	N	Column %	Row %
Domestic market	50	86.21	53.19	27	72.97	28.72	17	89.47	18.09	94	82.46	100.00
Foreign market	8	13.79	40.00	10	27.03	50.00	2	10.53	10.00	20	17.54	100.00
All	58	100.00	50.88	37	100.00	32.46	19	100.00	16.67	114	100.00	100.00

In Table 4. the values of the descriptive statistics for Digital culture (DC) are presented.

Table 4. Descriptive statistics for Digital culture (DC)

	Factors of DC	Mean	Std Dev	Std Err Mean	Upper 95% Mean	Lower 95% Mean	N
1	Impact	3.701754	1.021277	0.095651	3.891257	3.512252	114
2	Speed	4.780702	0.528125	0.049464	4.878698	4.682706	114
3	Openness	3.877193	1.090103	0.102098	4.079467	3.674919	114
4	Autonomy	3.842105	1.156581	0.108324	4.056714	3.627496	114
	All variable DC	3.8833333	0.8796537	0.0823871	4.0465571	3.7201096	114

In Table 5 the values of the descriptive statistics for the Organization's output (OO) are presented.

Table 5. Descriptive statistics for the Organization's output (OO)

		Mean	Std Dev	Std Err Mean	Upper 95% Mean	Lower 95% Mean	N
1	Agility	3.877193	1.1299648	0.1058309	4.0868631	3.6675229	114
2	Collaboration	3.9035088	1.0968119	0.1027258	4.1070272	3.6999903	114
3	Customer focus	3.6666667	1.2168919	0.1139724	3.8924665	3.4408668	114
4	Diversity	3.9035088	0.9020066	0.0844807	4.0708802	3.7361374	114
5	Execution	4.0087719	0.9821019	0.0919823	4.1910054	3.8265385	114
6	Innovation	3.9649123	0.9860067	0.092348	4.1478703	3.7819543	114
7	Integrity	3.8070175	0.8609235	0.0806329	3.9667658	3.6472693	114
8	fast-growing	3.8421053	1.1565814	0.1083238	4.0567142	3.6274963	114
9	Financial Performance	3.877193	1.1299648	0.1058309	4.0868631	3.6675229	114
10	Respect	3.9824561	0.986479	0.0923922	4.1655018	3.7994105	114
	All variable OO	4.0504386	0.8148102	0.076314	4.2016303	3.8992469	**114**

3.3. Correlation and regression analysis

Pearson's correlation values are given in Table 6.

Table 6. Pearson's Correlation

	Digital culture (DC)	Organization's output (OO)
Digital culture (DC)	1.0000	0.9108
Organization's output (OO)	0.9108	1.0000

Correlation coefficient - the link between the Digital Culture (DC) as independent variable and Organization's Output (OO) as dependent is 0.9108 and it is strong. Determination coefficient – exactly how it can be predicted that the Organization's output (OO) relative to Digital Culture (DC) is 82.95%.

The statistician's score is given in Table 7 and it is [F(1,112)=545.3312, p<0,0001].

Table 7. ANOVA for Digital Culture (DC) variable

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	1	72.540071	72.5401	545.3312
Error	112	14.898263	0.1330	**Prob > F**
C. Total	113	87.438333		<0.0001*

In Table 8 is determined the size of the contribution of the factors of the independent variable to the factors of dependent variable.

Table 8. Contribution Coefficients

Term	Estimate	Std Error	t Ratio	Prob>|t|	Std Beta	VIF
Intercept	-0.099529	0.173942	-0.57	0.5683	0	.
Organization's output (OO)	0.9833164	0.042108	23.35	<0.0001*	0.910832	1

Based on data from Table 8 a regression equation can be formed, which reads:

$y_1 = -0.099529 + 0.9833164 \cdot x_2$

or

Digital culture (DC)=-0.099529+0.9833164·Organization's Output (OO)

For the variable Organization's Output (OO). In Table 9 a basic evaluation of the model was performed. The determination coefficient is 0.829614, which means that with 82.96% variability, the dependent variable of Organization's Output (OO) can be explained by the independent, Digital culture (DC) variable. The connection between the variables is strong.

Table 9. Evaluating models for variables Organization's Output (OO)

RSquare	0.829614
RSquare Adj	0.828093
Root Mean Square Error	0.337834
Mean of Response	4.050439
Observations (or Sum Wgts)	114

The statistician rating was given in Table 10 and it is [F(1,112)= 545.3312, p<0,0001].

Table 10. ANOVA for variable Organization's Output (OO)

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	1	62.239702	62.2397	545.3312
Error	112	12.782776	0.1141	**Prob > F**
C. Total	113	75.022478		<0.0001*

3.4. Key results

Table 11 specifies the size of the contribution of an independent variable Digital culture (DC) to the dependent variable Organization's Output (OO). Based on this data, the hypothesis *H: Digital Culture Level (DC) can be verified, significantly affecting the level of Organization's Output (OO).*

Table 11. Contribution Coefficients

Term	Estimate	Std Error	t Ratio	Prob>|t|	Std Beta	VIF
Intercept	0.7741097	0.143824	5.38	<0.0001*	0	.
Digital culture (DC)	0.8436898	0.036129	23.35	<0.0001*	0.910832	1

Based on data from the previous table, a regression equation can be formed that reads:

$y_2 = 0.7741097 + 0.8436898 \cdot x_1$

or

Organization's Output =0.7741097+0.8436898·Digital culture (DC)

4. DISCUSSION AND CONCLUSIONS

The aim of the research was to show that the impact of the digital culture on the success of the organization thorough its outcome can be accountable, encouraging persistent striving for customer-focused, scalable results. The hypothesis is confirmed by the key results of the research in the paper.

The authors hope that such an system of interrelated values and digitally enabled practices can be remarkably effective when management gets it right. The realities of how companies talk about their culture is consistent with a prominent theory that defines organizational culture as a set of norms and values that are widely shared and strongly held throughout the organizational output, quality, productivity and safety improvement (Deal & Kennedy 1992; Goffee & Jones 1996; Groysberg, Price, and Jo-Jud Cheng 2018).

A company's core values should capture its unique identity, the enduring essence of the company that distinguishes it from competitors (Whetten 2006). When employees identify with a distinctive culture, they are more likely to incorporate core values in their daily activities and pursue their organization's goals (Dutton, Dukerich & Harquail 1994; Riketta & Van Dick 2005). A distinctive corporate culture can also differentiate an organization from competitors and provide a source of sustainable competitive advantage (Barney 1986). In fact, this research on the 114 companies shows that striving for integrity and stability in a company's culture does not hurt self-reported measures of innovation, profitability, and customer satisfaction.

Become a digital-ready organization without sacrificing important values and the practices that set digital companies apart is in a center of the activities of many traditional SMEs. The speed with which digital companies create and test innovations is the greatest advantage.

It is also important to preserve practices that promote integrity and stability, as it is the value of the organizational output. The customers, employees,

regulators, and shareholders would respect these qualities and the practices that support them.

Wherever possible, strict rules and controls must give way to broader guide-
lines and transparent monitoring. This transparency encourages high-
er performance and improves collaboration (Kvrgic, Popovic & Coric
2020; 2018; 2012; Jevtic, Dedjanski, Beslac, Grozdanic & Damnjanovic
2012; Jevtic, Dedjanski, Beslac & Grozdanic 2012b; Jevtic & Grozdan-
ic 2014; Jevtic, Zakic, Popovic, Coric & Kvrgic. 2020).

This research opened some future topics to be explored too. First, it is anoth-
er unforeseen opportunity emerged from the many process improvements
identified by employees. About that speak the opportunities brought by the
usage of the chat bots and the country's biometric identity system, along with
product simplification and some partnering, creations of a digital bank for
instance, that requires virtually no intervention from employees. At near-ze-
ro marginal cost, for example the digital bank's processes make it possible to
serve hundreds of millions inhabitants who could not be served profitably by
traditional banking processes, etc.

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UTICAJ DIGITALNE KULTURE NA REZULTATE POSLOVANJA ORGANIZACIJA MSP

Sažetak:

Kako vrednosti digitalne kulture organizacije treba da budu merljive i povezane sa rezultatima, cilj ovog istraživanja je bio da se uputi na mogući uticaj digitalne kulture na uspeh preduzeća kao organizacije podsticanjem na bolju komunikacijua sa klijentima. U tom cilju je sprovedeno 2019 godine empirijsko online istraživanje na uzorku od 114 preduzeća u Srbiji. Metode deskriptivne statistike, ANOVA test i Pirsonova korelacije su korištene u radu. Ključni rezultati podržavaju hipotezu rada da digitalna kultura kroz vrednosti: uticaja, brzinw, autonomijw i otvorenosti utiče na rezultate u poslovanju orgnaizacije koji se mere uticajem na njene faktore, agilnost, saradnju, orijentaciju na klijenate, raznolikost, izvršenje, inovacije, integritet, brzi rast i finansijske performanse. Autori se nadaju da takav sistem međusobno povezanih vrednosti i digitalno omogućenih praksi može biti izuzetno efikasan kada je menadžment organizacije efikasna u komunikaciji digitalne kulture i rezultata poslovanja. Izjave preduezća o vrednostima digitalne kulture treba da su teo-

rijski uokvirene i usklađene kao skup normi koje se široko dele i snažno održavaju kroz proizvodnju, kvalitet, produktivnost i unapređenje bezbednosti. Doprinos rada jeste u kvalitativnom uticaju istraživanja osnovnih vrednosti digitalne kulture u pravcu njihove suštine sa raznim faktorima poslovanja preduzeća, pružajući jasnu vezu sa poslovnim ishodima.

CHALLENGES OF ICT SKILLS OF SME EMPLOYEES

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Abstract:

This paper explores the technology s role in the business addressing questions about the future of work in the organization. Based on a survey of 264 SMEs representatives, and interviews of 10 experts-business and technology leaders, this paper discuss the future of work in the organization influenced by the technological changes. Whether the organizations would employ in future workers on the basis of full employment arrangements improving their digital skills, or some platform workers-gig, crowed, machines, freelancers, and so solve the

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problem of their coming human resource skill shortages gaps depends on their HR strategy. Therefore, in this paper IC variety of aspects of HRM are discussed in new digital age and in with it enhance the field by strengthening the knowledge of the SMEs organization's leaders considering the nature of the digital native workforce. The hypothesis of the research, that the human resource strategy of SMEs organizations in further medium run term would be significantly influenced by technological changes manifested in the six patterns of work, is confirmed. Descriptive statistical analysis and Fuzzy DEMATEL decision-making methods are used in the research. The paper is based on the theoretical perspectives and methodological approach, reflecting the diversity in this field with the aim to contribute to the development of the evidence base for HR in the digital age.

1. INTRODUCTION

Technology transformation to a new role in the organization requires the work of technology to change. The future of employment and work would be reshaped by the proliferation of disruptive technologies, market, and business strategy in human resources, global workforce and demographic trends.

Figure 1. Rethinking human resource, &workplace

Workforce options
Full-time workers, managed services, freelancers, gig workers, machines, crowds

Work transformation
Robotics, artifical intelligence, cloud, technology automation

Workplace readiness
Workplace for cocreation, collaboration tools, cultures of high performance, workplace practices, reshaping workplace
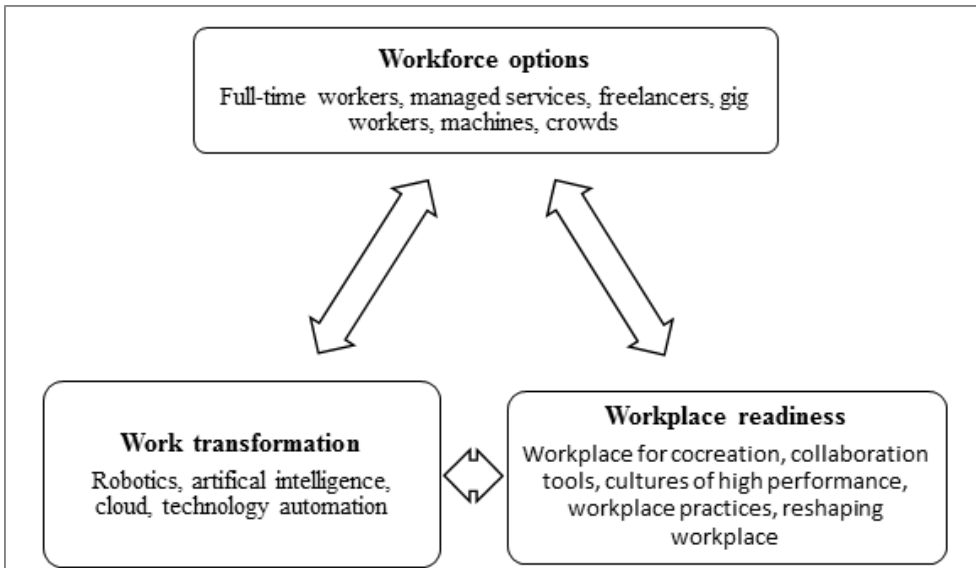
Source: According to Deloitte

This paper focuses on the impact of these changes in HRM, in relation to changes to the workforce, to HRM in general and more specifically to the use of technology in delivering HRM activities of the organization in the medium turn. A well-trained workforce equipped with the skills required to adopt automation and AI technologies will ensure that SMEs enjoy strengthened productivity growth and that the talents of all workers are harnessed (Grozdanic, Radovic Markovic, Jevtic & Vukosavljevic 2013; Grozdanic, Radovic-Markovic & Jevtic 2013b; Grozdanic, Radovic-Markovic, Papic, Kvrgic & Jevtic 2012; Dimitrijevic, Vukadinovic & Grozdanic 2013). The ability of the organization to ensure the successful HR strategy within their business one will depend in large part on how well the workforce is trained and how adaptable companies and workers and their supply chains will prove to be in the face of multiple new challenges from automation adoption.

The paper on the structure provides an introduction, the literature review, research results on the future of human resource employment strategy of his organization, conclusions and references.

2. LITERATURE REVIEW

How can an organization leverage technology to redesign current work outcomes to focus on productivity and cost efficiencies, the jobs and roles change, skills and capabilities which will be needed would push the organizational HRM, HRM to react to technology changes and align its strategies and activities to this new labour market cohort.

Searching for adequate ways to recruit, develop, compensate, etc. such "digital employees" and moreover to integrate them with previous generations of employees would be very quickly one of the main activities of the organization. The "digital employees", "digital work" and "digital employee management" are going to become the focal areas of digital changes of HRM. The identification of the actual digitally induced changes in attitudes, qualifications, behaviors and expectation of younger employees, makes the challenge for HRM of the organizations (Popovic, Kvrgić, Corić, Avakumović & Milosević 2020; Kvrgic 2018; Spasic & Simonovic 2019). The operative adaptation of HRM and strategy to changing workforce constitutes a step necessary to support organizations further on. Digital employees constitute a first notable challenge of the HR profession and the area of digital changes (D'Netto & Ahmed, 2012; Ng, Lyons & Schweitzer 2012; Powell, Piccoli & Ives 2004).

A larger change in the core subject matter of the HR profession assumes "digital employees": labeled with various terms such as "digital natives" (Prensky 2001), "millennials" (Deal, Altman & Rogelberg 2010). A new generation

of people with distinctively different attitudes, qualifications, behaviors and expectations has been shaped by the interaction with digital technolog (Zakic et al. 2019). The literature on the phenomenon suggests that, this new cohort of people is generally characterized by marked digital qualifications, multitasking capabilities for networking, learning by doing and preference of instant gratifications and frequent rewards (Lancaster & Stillman 2002; Bennett, Maton & Kervin 2008; Helsper & Eynon 2010). A "digital work", referring to the content as to the organization of work (Bawden 2008, 19), a broader set of technical as well as mental skills to systematically acquire, process, produce and use information (Nawaz & Kundi, 2010; Radović-Marković, Jevtić, Grozdanić, Marković & Vuceković 2014; Radovic-Marković, Grozdanic & Jevtic 2014b; Radović-Marković, Grozdanić, Kvrgić & Marković 2012) – turns out a crucial key qualification for more and more employees.

The digital forms of work organization change HRM can be seen on e-lancing (Aguinis & Lawal 2013) which organizes work via web-based marketplaces, replacing conventional employees by freelancing. It deeply changes and sometimes even questions "classic" HR functions such as recruiting or developing (Jevtic, Zakic, Popovic, Coric & Kvrgic 2020; Jevtic, Zakic, Popovic, Coric & Kvrgic 2020b; Jevtic & Grozdanic 2014; Jevtic, Dedjanski, Beslac, Grozdanic & Damnjanovic 2012; Jevtić, Deđanski, Beslac & Grozdanic 2012b.). The challenge for e-HRM lies in recognizing the requirements that such digital forms of work organization pose on managing employees as well as further categories of contributors. A major change that visibly poses multiple new requirements of the HR profession makes the ongoing digitalization of work content and organization. The employees incorporated via digital self-service, and by establishing new kinds of cooperation subsumed as "virtual HR" (Lepak &d Snell 1998; Strohmeier 2007; 2019) are result of the digitalization that affected human resource of the enterprises. The clear shift to incorporating technical implementation and application skills show new HR qualifications in many organizations (Hempel 2004). Web-based technological innovation within HR contributes to the rebuilding and re-

inforcement of the employee-HR department relationship as the potential outcomes of e-HRM.

Using institutional theory and a range of qualitative data, recruitment practices is strongly influenced by functional and social pressures existing in the wider society, reflected in the use of e-recruitment and digital HRM in general.

3. METHODS AND MAERIALS

3.1. Sampling

For the purposes of this work, an online experimental survey of the attitudes of SME organizations was conducted on the topic of their experiences and plans related to the missing digital skills and knowledge of employees. To that end, 264 companies in Serbia were interviewed in 2020, which makes up a sample of the survey. The basic results, processed by description, are presented in Table 1.

Table 1. Frequencies and percentage share

Description		No	%	
Legal form of the enterprise	Private independent	264	67.19%	100 %
	Public enterprise		20.31%	
	Part of large system		7.81%	
	Foreign company zeće		4.69%	
Years in business	From 1 to 5	264	28.13%	100 %
	From 6 to 10		40.63%	
	over 11		31.25%	
Industry sector	manufacturing		30.00%	100 %
	agriculture		10.00%	
	ICT		8.00%	
	Toursism, hosipality & travel		6.00%	
	Trade		10.00%	
	Logistics, infrastructure		6.00%	
	Conctuction		10.00%	
	Financial and insurance services		10.00%	
	Media, marketing, printing		5.00%	
	Personal services		5.00%	
Last year income	Less than €50,000		9.38%	100 %
	From €50.001 to €500.000		23.44%	
	From €500.001 to €2 mill.		56.25%	
	Over €2 mill.		10.94%	
Function of respondents	Owner		18.75%	100 %
	Manager		29.69%	
	Director direktor (chief of the ICT dep.)		40.63%	
	Other		10.94%	

The majority of the companies surveyed are private, independent enterprises, 67.19%, as well as those aged 6-10, from the industrial sectors of manufacturing, trade, construction and financial services. It is mostly erased with an income of 500,000 to €2 mill. 48.44% of the company›s representatives who participated, a per function, the owner and manager of the company.

It is especially important that 40.63% of the representatives were heads of the company's ICT department, gave their attitudes about digital skills and knowledge of employees and those who were, or would be needed to be engaged in the business process in the medium term.

Table 2. Employed in the last three years (2017-2020)

Description	% Of total	No	%
Full-time employees	62%	264	100%
Temporary employees/agency	38%		

In the last three years, 2017-2020, there have been 264 companies. On average, most had full-time employees, and fewer workers on temporary contracts, but with a tendency to increase this method of employment in the coming medium term.

Measuring instrument of the research isfurther six working patterns, as variables:

1. (C_1) - full time employees (abbr. as FTE)
2. (C_2) - machines (abbr. as M)
3. (C_3) - crowds (abbr. as C)
4. (C_4) - gig workers (abbr. as GW)
5. (C_5) - freelancers (abbr. as F)
6. (C_6) - managed services (abbr. as MS)

3.2. Methodology

For gathering the views of SME representatives who made up a sample of experimental research on Serbian territory in 2020, online questionnaire methods and descriptive statistics were used. To obtain the results of the research, the Fuzzy DEMATEL method was used (Zadeh 1965; Govindan, Khodaverdi & Vafadarnikjoo 2016; Vafadarnikjoo, Mobin, Salmon & Javadian 2015). This method is eligible for better definition of priorities in problem decision-making, using expert opinion in the organization. Valorization of paragraphs of 10 excellences on the topic of this paper was conducted through three levels of research in this method:

1. Select a team of experts, with good experience and knowledge in the appropriate field for strategic decision-making.

2. - Define criteria for evaluating problems, using the fuzzy matrix of direct assessments. Experts need to determine the relationship between the criteria (Table 3). They did so by on a scale of five comparisons, they gave their views, 0 (not affected), 1 (little influence), 2 (medium impact), 3 (highly influenced) and 4 (very high). On this scale, experts gave their linguistic assessments for the relationship between defined criteria. Intuitistic trapezoid fuzzy numbers were used for evaluation on this occasion.

3. – Due to the convenience of deciding, these trapezoid fuzzy numbers are further converted to crisp numbers (Table 3). Fuzzy intuitive direct relative matrix (M) is given (formula 1), and it reads:

$$M = 1/4 \ (a_1 + a_2 + a_3 + a_4) \qquad (1)$$

Table 3. Intuitistic Fuzzy linguistic scale

Linguistic phrase Result	Influence	Intuitistic trapezoids Fuzzy number	Expected crips value
No influence (NI)	0	(0; 0; 0; 0)	0
Low influence (LI)	1	(0; 0.1; 0.2; 0.3)	0.15
Medium influence (MI)	2	(0.3; 0.4; 0.5; 0.6)	0.45
High influence (HI)	3	(0.7; 0.8; 0.9; 1)	0.85
Very high influence (WHI)	4	(1; 1; 1; 1)	1

Source: According to Lin 2013.

3.5. Key results

A team of 10 experts compared the criteria: C1 - full time employees, C2 - machines, C3 - crowds, C4 - gig workers, C5 - freelancers and C6 - managed services for HR strategy. In Table 3 linguistic influence values were given to 10 criteria experts: C1, C2, C3, C4, C5 and C6 for future decisions of the company regarding human resources (T.4).

Table 4. Opinions of 10 experts on set criteria: C_1, C_2, C_3, C_4, C_5 i C_6

	C_1	C_2	C_3	C_4	C_5	C_6
C_1	NI, NI, NI, NI, NI, NI, NI, NI, NI, NI	HI, MI, HI, WHI, LI, HI, HI, MI, HI, WHI	MI, HI, HI, HI, MI, HI, MI, HI, HI, HI	HI, HI, MI, HI, WHI, HI, HI, HI, MI, HI	HI, MI, HI, WHI, MI, HI, WHI, HI, HI, HI	HI, MI, HI, WHI, MI, HI, WHI, HI, HI, HI
C_2	HI, MI, HI, WHI, HI, MI, HI, MI, HI, WHI	NI, NI, NI, NI, NI, NI, NI, NI, NI, NI	MI, HI, LI, MI, HI, WHI, MI, HI, LI, MI	MI, MI, HI, WHI, MI, MI, MI, MI, HI, WHI	HI, MI, WHI, HI, MI, HI, MI, MI, HI, WHI	HI, MI, WHI, HI, MI, HI, MI, MI, HI, WHI
C_3	LI, MI, HI, HI, HI, LI, LI, MI, HI, HI	MI, LI, WHI, HI, MI, LI, MI, LI, WHI, HI	NI, NI, NI, NI, NI, NI, NI, NI, NI, NI	WHI, HI, MI, WHI, HI, LI, WHI, HI, MI, WHI	HI, LI, HI, HI, MI, LI, WHI, HI, MI, WHI	HI, LI, HI, HI, MI, LI, WHI, HI, MI, WHI
C_4	LI, HI, WHI, WHI, HI, LI, LI, HI, WHI, WHI	MI, HI, MI, WHI, LI, LI, MI, HI, MI, WHI	MI, WHI, WHI, WHI, MI, HI, MI, HI, WHI, WHI	NI, NI, NI, NI, NI, NI, NI, NI, NI, NI	HI, LI, MI, HI, MI, HI, MI, WHI, WHI, WHI	HI, LI, MI, HI, MI, HI, MI, WHI, WHI, WHI
C_5	HI, WHI, HI, WHI, WHI, HI, MI, HI, MI, WHI	MI, HI, MI, WHI, MI, MI, MI, MI, HI, WHI	WHI, HI, HI, HI, HI, MI, HI, LI, HI, HI	HI, LI, MI, HI, WHI, HI, MI, MI, HI, WHI	NI, NI, NI, NI, NI, NI, NI, NI, NI, NI	HI, MI, HI, WHI, WHI, HI, MI, HI, MI, HI
C_6	HI, LI, WHI, HI, MI, HI, WHI, HI, MI, WHI	HI, LI, MI, MI, MI, HI, MI, WHI, WHI, WHI	WHI, HI, MI, MI, HI, WHI, WHI, HI, MI, HI	MI, LI, WHI, HI, MI, WHI, MI, MI, WHI, HI	LI, HI, MI, WHI, HI, LI, LI, HI, HI, WHI	NI, NI, NI, NI, NI, NI, NI, NI, NI, NI

In Table 5 the results of the impact of 10 criteria experts are given: C1, C2, C3, C4, C5, and C6 for HR strategy of the organisation

Table 5. Impact results from 10 experts on set criteria: C_1, C_2, C_3, C_4, C_5 i C_6

	C_1	C_2	C_3	C_4	C_5	C_6
C_1	0,0,0,0,0,0,0,0,0,0	3,2,3,4,1,3,3,2,3,4	2,3,3,3,2,3,2,3,3,3	3,3,2,3,4,3,3,3,2,3	3,2,3,4,2,3,4,3,3,3	3,2,3,4,2,3,4,3,3,3
C_2	3,2,3,4,3,2,3,2,3,4	0,0,0,0,0,0,0,0,0,0	2,3,1,2,3,4,2,3,1,2	2,2,3,4,2,2,2,2,3,4	3,2,4,3,2,3,2,2,3,4	3,2,4,3,2,3,2,2,3,4
C_3	1,2,3,3,3,1,1,2,3,3	2,1,4,3,2,1,2,1,4,3,	0,0,0,0,0,0,0,0,0,0	4,3,2,4,3,1,4,3,2,4	3,1,3,3,2,1,4,3,2,4,	3,1,3,3,2,1,4,3,2,4
C_4	1,3,4,4,3,1,1,3,4,4,	2,3,2,4,1,1,2,3,2,4	2,4,4,4,2,3,2,3,4,4	0,0,0,0,0,0,0,0,0,0	3,1,2,3,2,3,2,4,4,4	3,1,2,3,2,3,2,4,4,4
C_5	3,4,3,4,4,3,2,3,2,4	2,3,2,42,2,2,2,3,4	4,3,3,3,3,2,3,1,3,3	3,1,2,3,4,3,2,2,3,4	0,0,0,0,0,0,0,0,0,0	3,2,3,4,4,3,2,3,2,3
C_6	3,1,4,3,2,3,4,3,2,4,	3,1,2,2,2,3,2,4,4,4	4,3,2,2,3,4,4,3,2,3	2,1,4,3,2,4,2,2,4,3,	1,3,2,4,3,1,1,3,3,4,	0,0,0,0,0,0,0,0,0,0

In Table 6 are given influence values of 10 criteria experts: C1, C2, C3, C4, C5 and C6 expressed via intuitistic trapezoid Fuzzy numbers for HR strategy.

Table 6. Intuition trapezoid Fuzzy influences 10 experts on set criteria:
C_1, C_2, C_3, C_4, C_5 i C_6

	C_1	C_2	C_3	C_4	C_5	C_6
C_1	(0; 0; 0; 0),	(0.7; 0.8; 0.9; 1),	(0.3; 0.4; 0.5; 0.6),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(0; 0; 0; 0),	(0.3; 0.4; 0.5; 0.6),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),
	(0; 0; 0; 0),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(0.3; 0.4; 0.5; 0.6),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(0; 0; 0; 0),	(1; 1; 1; 1),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(1; 1; 1; 1),	(1; 1; 1; 1),
	(0; 0; 0; 0),	(0; 0.1; 0.2; 0.3),	(0.3; 0.4; 0.5; 0.6),	(1; 1; 1; 1),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),
	(0; 0; 0; 0),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(0; 0; 0; 0),	(0.7; 0.8; 0.9; 1),	(0.3; 0.4; 0.5; 0.6),	(0.7; 0.8; 0.9; 1),	(1; 1; 1; 1),	(1; 1; 1; 1),
	(0; 0; 0; 0),	(0.3; 0.4; 0.5; 0.6),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(0; 0; 0; 0),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(0.3; 0.4; 0.5; 0.6),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(0; 0; 0; 0)	(1; 1; 1; 1)	(0.7; 0.8; 0.9; 1)	(0.7; 0.8; 0.9; 1)	(0.7; 0.8; 0.9; 1)	(0.7; 0.8; 0.9; 1)
C_2	(0.7; 0.8; 0.9; 1),	(0; 0; 0; 0),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(0.3; 0.4; 0.5; 0.6),	(0; 0; 0; 0),	(0.7; 0.8; 0.9; 1),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),
	(0.7; 0.8; 0.9; 1),	(0; 0; 0; 0),	(0; 0.1; 0.2; 0.3),	(0.7; 0.8; 0.9; 1),	(1; 1; 1; 1),	(1; 1; 1; 1),
	(1; 1; 1; 1),	(0; 0; 0; 0),	(0.3; 0.4; 0.5; 0.6),	(1; 1; 1; 1),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(0.7; 0.8; 0.9; 1),	(0; 0; 0; 0),	(0.7; 0.8; 0.9; 1),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),
	(0.3; 0.4; 0.5; 0.6),	(0; 0; 0; 0),	(1; 1; 1; 1),	(0.3; 0.4; 0.5; 0.6),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(0.7; 0.8; 0.9; 1),	(0; 0; 0; 0),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),
	(0.3; 0.4; 0.5; 0.6),	(0; 0; 0; 0),	(0.7; 0.8; 0.9; 1),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),
	(0.7; 0.8; 0.9; 1),	(0; 0; 0; 0),	(0; 0.1; 0.2; 0.3),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(1; 1; 1; 1)	(0; 0; 0; 0)	(0.3; 0.4; 0.5; 0.6)	(1; 1; 1; 1)	(1; 1; 1; 1)	(1; 1; 1; 1)
C_3	(0; 0.1; 0.2; 0.3),	(0.3; 0.4; 0.5; 0.6),	(0; 0; 0; 0),	(1; 1; 1; 1),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(0.3; 0.4; 0.5; 0.6),	(0; 0.1; 0.2; 0.3),	(0; 0; 0; 0),	(0.7; 0.8; 0.9; 1),	(0; 0.1; 0.2; 0.3),	(0; 0.1; 0.2; 0.3),
	(0.7; 0.8; 0.9; 1),	(1; 1; 1; 1),	(0; 0; 0; 0),	(0.3; 0.4; 0.5; 0.6),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(0; 0; 0; 0),	(1; 1; 1; 1),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(0.7; 0.8; 0.9; 1),	(0.3; 0.4; 0.5; 0.6),	(0; 0; 0; 0),	(0.7; 0.8; 0.9; 1),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),
	(0; 0.1; 0.2; 0.3),	(0; 0.1; 0.2; 0.3),	(0; 0; 0; 0),	(0; 0.1; 0.2; 0.3),	(0; 0.1; 0.2; 0.3),	(0; 0.1; 0.2; 0.3),
	(0; 0.1; 0.2; 0.3),	(0.3; 0.4; 0.5; 0.6),	(0; 0; 0; 0),	(1; 1; 1; 1),	(1; 1; 1; 1),	(1; 1; 1; 1),
	(0.3; 0.4; 0.5; 0.6),	(0; 0.1; 0.2; 0.3),	(0; 0; 0; 0),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),	(0.7; 0.8; 0.9; 1),
	(0.7; 0.8; 0.9; 1),	(1; 1; 1; 1),	(0; 0; 0; 0),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),	(0.3; 0.4; 0.5; 0.6),
	(0.7; 0.8; 0.9; 1)	(0.7; 0.8; 0.9; 1)	(0; 0; 0; 0)	(1; 1; 1; 1)	(1; 1; 1; 1)	(1; 1; 1; 1)

C₄	(0; 0.1; 0.2; 0.3), (0.7; 0.8; 0.9; 1), (1; 1; 1; 1), (1; 1; 1; 1), (0.7; 0.8; 0.9; 1), (0; 0.1; 0.2; 0.3), (0; 0.1; 0.2; 0.3), (0.7; 0.8; 0.9; 1), (1; 1; 1; 1), (1; 1; 1; 1)	(0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (1; 1; 1; 1), (0; 0.1; 0.2; 0.3), (0; 0.1; 0.2; 0.3), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (1; 1; 1; 1)	(0.3; 0.4; 0.5; 0.6), (1; 1; 1; 1), (1; 1; 1; 1), (1; 1; 1; 1), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (1; 1; 1; 1), (1; 1; 1; 1)	(0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0)	(0.7; 0.8; 0.9; 1), (0; 0.1; 0.2; 0.3), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (1; 1; 1; 1), (1; 1; 1; 1), (1; 1; 1; 1)	(0.7; 0.8; 0.9; 1), (0; 0.1; 0.2; 0.3), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (1; 1; 1; 1), (1; 1; 1; 1), (1; 1; 1; 1)
C₅	(0.7; 0.8; 0.9; 1), (1; 1; 1; 1), (0.7; 0.8; 0.9; 1), (1; 1; 1; 1), (1; 1; 1; 1), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (1; 1; 1; 1)	(0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (1; 1; 1; 1), (0.3; 0.4; 0.5; 0.6), (0.3; 0.4; 0.5; 0.6), (0.3; 0.4; 0.5; 0.6), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (1; 1; 1; 1)	(1; 1; 1; 1), (0.7; 0.8; 0.9; 1), (0.7; 0.8; 0.9; 1), (0.7; 0.8; 0.9; 1), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (0; 0.1; 0.2; 0.3), (0.7; 0.8; 0.9; 1), (0.7; 0.8; 0.9; 1)	(0.7; 0.8; 0.9; 1), (0; 0.1; 0.2; 0.3), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (1; 1; 1; 1), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (1; 1; 1; 1)	(0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0)	(0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (1; 1; 1; 1), (1; 1; 1; 1), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1)
C₆	(0.7; 0.8; 0.9; 1), (0; 0.1; 0.2; 0.3), (1; 1; 1; 1), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (1; 1; 1; 1), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (1; 1; 1; 1)	(0.7; 0.8; 0.9; 1), (0; 0.1; 0.2; 0.3), (0.3; 0.4; 0.5; 0.6), (0.3; 0.4; 0.5; 0.6), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (1; 1; 1; 1), (1; 1; 1; 1), (1; 1; 1; 1)	(1; 1; 1; 1), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1), (1; 1; 1; 1), (1; 1; 1; 1), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (0.7; 0.8; 0.9; 1)	(0.3; 0.4; 0.5; 0.6), (0; 0.1; 0.2; 0.3), (1; 1; 1; 1), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (1; 1; 1; 1), (0.3; 0.4; 0.5; 0.6), (0.3; 0.4; 0.5; 0.6), (1; 1; 1; 1), (0.7; 0.8; 0.9; 1)	(0; 0.1; 0.2; 0.3), (0.7; 0.8; 0.9; 1), (0.3; 0.4; 0.5; 0.6), (1; 1; 1; 1), (0.7; 0.8; 0.9; 1), (0; 0.1; 0.2; 0.3), (0; 0.1; 0.2; 0.3), (0.7; 0.8; 0.9; 1), (0.7; 0.8; 0.9; 1), (1; 1; 1; 1)	(0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0), (0; 0; 0; 0)

In Table 7 the opinion values of 10 experts on the set criteria of C1, C2, C3, C4, C5 and C6 expressed the expected crips values for HR strategy of the organization.

Table 7. Opinions of 10 experts on the set criteria of C1, C2, C3, C4, C5 and C6 expressed expected crips values

	C_1	C_2	C_3	C_4	C_5	C_6
C_1	0, 0, 0, 0, 0, 0, 0, 0, 0, 0	0.85, 0.45, 0.85, 1, 0.15, 0.85, 0.85, 0.45, 0.85, 1	0.45, 0.85, 0.85, 0.85, 0.45, 0.85, 0.45, 0.85, 0.85, 0.85	0.85, 0.85, 0.45, 0.85, 1, 0.85, 0.85, 0.85, 0.45, 0.85	0.85, 0.45, 0.85, 1, 0.45, 0.85, 1, 0.85, 0.85, 0.85	0.85, 0.45, 0.85, 1, 0.45, 0.85, 1, 0.85, 0.85, 0.85
C_2	0.85, 0.45, 0.85, 1, 0.85, 0.45, 0.85, 0.45, 0.85, 1	0, 0, 0, 0, 0, 0, 0, 0, 0, 0	0.45, 0.85, 0.15, 0.45, 0.85, 1, 0.45, 0.85, 0.15, 0.45	0.45, 0.45, 0.85, 1, 0.45, 0.45, 0.45, 0.45, 0.85, 1	0.85, 0.45, 1, 0.85, 0.45, 0.85, 0.45, 0.45, 0.85, 1	0.85, 0.45, 1, 0.85, 0.45, 0.85, 0.45, 0.45, 0.85, 1
C_3	0.15, 0.45, 0.85, 0.85, 0.85, 0.15, 0.15, 0.45, 0.85, 0.85	0.45, 0.15, 1, 0.85, 0.45, 0.15, 0.45, 0.15, 1, 0.85	0, 0, 0, 0, 0, 0, 0, 0, 0, 0	1, 0.85, 0.45, 1, 0.85, 0.15, 1, 0.85, 0.45, 1	0.85, 0.15, 0.85, 0.85, 0.45, 0.15, 1, 0.85, 0.45, 1	0.85, 0.15, 0.85, 0.85, 0.45, 0.15, 1, 0.85, 0.45, 1
C_4	0.15, 0.85, 1, 1, 0.85, 0.15, 0.15, 0.85, 1, 1	0.45, 0.85, 0.45, 1, 0.15, 0.15, 0.45, 0.85, 0.45, 1	0.45, 1, 1, 1, 0.45, 0.85, 0.45, 0.85, 1, 1	0, 0, 0, 0, 0, 0, 0, 0, 0, 0	0.85, 0.15, 0.45, 0.85, 0.45, 0.85, 0.45, 1, 1, 1	0.85, 0.15, 0.45, 0.85, 0.45, 0.85, 0.45, 1, 1, 1
C_5	0.85, 1, 0.85, 1, 1, 0.85, 0.45, 0.85, 0.45, 1	0.45, 0.85, 0.45, 1, 0.45, 0.45, 0.45, 0.45, 0.85, 1	1, 0.85, 0.85, 0.85, 0.85, 0.45, 0.85, 0.15, 0.85, 0.85	0.85, 0.15, 0.45, 0.85, 1, 0.85, 0.45, 0.45, 0.85, 1	0, 0, 0, 0, 0, 0, 0, 0, 0, 0	0.85, 0.45, 0.85, 1, 1, 0.85, 0.45, 0.85, 0.45, 0.85
C_6	0.85, 0.15, 1, 0.85, 0.45, 0.85, 1, 0.85, 0.45, 1	0.85, 0.15, 0.45, 0.45, 0.45, 0.85, 0.45, 1, 1, 1	1, 0.85, 0.45, 0.45, 0.85, 1, 1, 0.85, 0.45, 0.85	0.45, 0.15, 1, 0.85, 0.45, 1, 0.45, 0.45, 1, 0.85	0.15, 0.85, 0.45, 1, 0.85, 0.15, 0.15, 0.85, 0.85, 1	0, 0, 0, 0, 0, 0, 0, 0, 0

In Table 8 the average opinions of 10 criteria experts were given: C1, C2, C3, C4, C5 and C6 for HR strategy. These sizes are given as the mean of the criterion response to crips numbers.

Table 8. Average opinions of 10 experts on set criteria:
C_1, C_2, C_3, C_4, C_5 i C_6

	C_1	C_2	C_3	C_4	C_5	C_6	Σ
C_1	0	0.73	0.73	0.785	0.785	0.8	3.8300
C_2	0.76	0	0.565	0.64	0.72	0.72	3.4050
C_3	0.56	0.55	0	0.76	0.66	0.66	3.1900
C_4	0.7	0.58	0.805	0	0.705	0.705	3.4950
C_5	0.83	0.64	0.755	0.69	0	0.76	3.6750
C_6	0.745	0.665	0.775	0.665	0.63	0	3.4800
Σ	3.5950	3.1650	3.6300	3.5400	3.5000	3.6450	21.0750

In Table 9, the values (N) of the normative initial impact matrix of 10 experts on the HR strategy for criteria are given: C1, C2, C3, C4, C5, and C6.

Table 9. Normative initial impact matrix of 10 experts on set criteria:
C_1, C_2, C_3, C_4, C_5 i C_6

	C_1	C_2	C_3	C_4	C_5	C_6
C_1	0	0.200274348	0.200274348	0.215363512	0.215363512	0.219478738
C_2	0.208504801	0	0.155006859	0.17558299	0.197530864	0.197530864
C_3	0.153635117	0.150891632	0	0.208504801	0.181069959	0.181069959
C_4	0.192043896	0.159122085	0.22085048	0	0.193415638	0.193415638
C_5	0.227709191	0.17558299	0.207133059	0.189300412	0	0.208504801
C_6	0.204389575	0.182441701	0.212620027	0.182441701	0.172839506	0

In Table 0 the criteria relationship matrix is provided: C1, C2, C3, C4, C5, and C6 for HR strategy.

Table 10. Total Criteria Relationship Matrix. C_1, C_2, C_3, C_4, C_5 i C_6

	C_1	C_2	C_3	C_4	C_5	C_6	D	D+R	(D+R) rank	D-R	(D-R) rank	ω_i	W_i	W_i rank
C_1	4.71	4.40	4.94	4.84	4.78	4.95	28.62	55.69	1	1.55	2	55.7116	17.44%	1
C_2	4.45	3.85	4.47	4.39	4.35	4.50	26.01	50.37	6	1.65	1	50.3970	15.78%	6
C_3	4.16	3.76	4.08	4.16	4.10	4.24	24.50	51.93	5	-2.93	6	52.0126	16.29%	5
C_4	4.51	4.05	4.59	4.31	4.42	4.57	26.45	53.27	4	-0.37	4	53.2713	16.68%	4
C_5	4.74	4.24	4.78	4.67	4.45	4.78	27.66	54.15	2	1.17	3	54.1626	16.96%	2
C_6	4.50	4.06	4.57	4.45	4.39	4.39	26.36	53.79	3	-1.07	5	53.8006	16.85%	3
R	27.07	24.36	27.43	26.82	26.49	27.43	/	/	/	/	/	/	/	/
Sum	/	/	/	/	/	/	159.60	319.20	/	0.00	/	319.36	100.00%	/

Figure 2 gives a Causal Diagram on the performance and the significance of the criteria C1, C2, C3, C4, C5 and C6 per (Vafadarnikjoo, Mobin, Salmon & Javadian 2015) HR strategies of the organizations. It can be seen that based on the importance and its normative ranking sizes that:

– The most significant criterion for the number of experts set is: C1 - full time employees 55.7116 (17.44%, (1),
– Then criteria C5 - freelancers 54.1626 (16.96%, (2),
– C6 - managed services 53.8006 (16.85%, (3),
– Criterion C4 - gig workers 53.2713 (16.68%), (4),
– Criteria C3 - crowds 52.0126 (16.29%,), (5), and
– Finally criterion C2 - machines 50.3970 (15.78%), (6).

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Figure 2. Causal Diagram about set criteria: C_1, C_2, C_3, C_4, C_5 i C_6
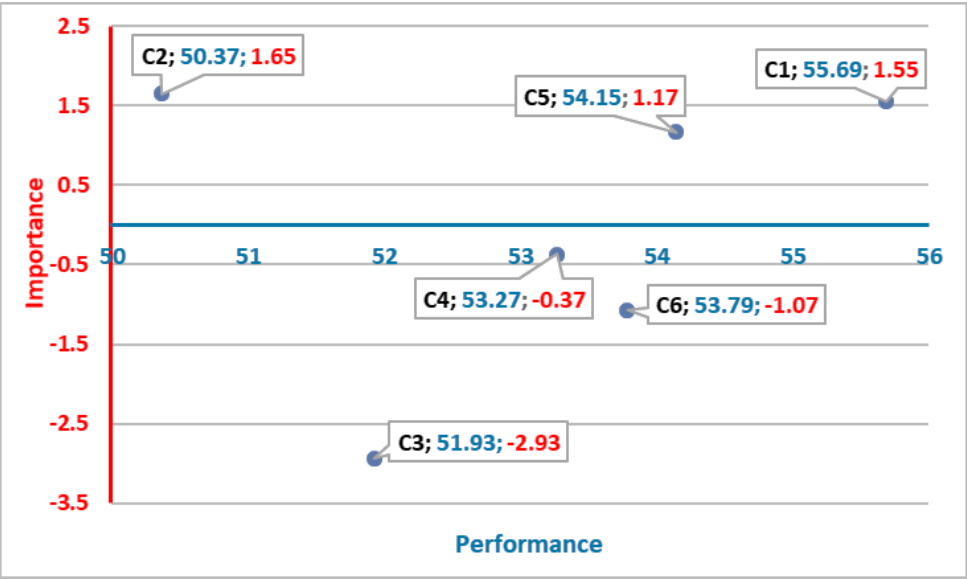
4. DISCUSSION AND CONCLUSIONS

HR strategy is not limited; therefore it is necessary to find measures and ways to match the criteria of C1 - full time employees, C2 - machines, C3 - crowds, C4 - gig workers, C5 - freelancers and C6 - managed services. The results of the experts' opinions on the set criteria for HR strategy are displayed in the Causal Diagram, showing the importance of the criteria on the axle (D+R). Success factor that is ranked for the following significance: the biggest impact on HR strategy of surveyed enterprises in the future medium term would have the factor C1 - full time employees. It would not be over 60% as in previous time, but still the highest in the structure of further employment. After that the category C5 – freelancers are getting higher importance, than C6 - managed services, C4 - gig workers and C3 – crowds. Ultimately C2 – machines, what type of the working pattern and employment in the HR strategy of the enterprises would also rise but less than all other types. On the axle (D-R) the cause of effects – i.e. adoption of

critical factors for HR strategy demonstrates the following importance of the new digital, platform work and types of employment for the enterprise way they plan to overcome the digital skill gap of their employees: the biggest impact would have the factor C2 – machines, then C1 -full time employees, then C5 – freelancers, C4 - gig workers and C6 - managed services at the end of C3- crowds.

It can be concluded with, that the Human resource strategy decision-making model using the Fuzzy DEMATEL method has shown that the method was suitable for solving such strategic problems in the so-called, a gentle environment, as it can investigate any similar complex decision-making problem. The results, obtained by the opinion of 10 experts on the set criteria of C1 - full time employees, C2 - machines, C3 - crowds, C4 - gig workers, C5 - freelancers and C6 – can be well expressed through the Causal Diagram when analyzing HR strategies.

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IZAZOVI IKT VEŠTINA ZAPOSLENIH U MALIM I VELIKIM PREDUZEĆIMA

Sažetak:

Ovaj rad istražuje ulogu tehnologije u poslovanju rešavajući pitanja o budućnosti rada u organizaciji. Na osnovu istraživanja 264 predstavnika malih i srednjih preduzeća, i intervjua 10 eksperata - poslovnih i tehnoloških lidera, ovaj rad govori o budućnosti rada u organizaciji pod uticajem tehnoloških promena. Da li će preduzeća u budućem srednjeročnom periodu zapošljavati radnike u stalnom radnom odnosu uz edukaciju za poboljšnje njihovih digitalnih veština, ili će više koristiti neke radnike na platformi, frilensere, gig radnike, mašine kako bi nešavali nedostatak ovih, zavisiće od njihove HR strategije. Zbog toga ovaj rad i govori o raznim aspektima HRM-a u novom digitalnom dobu i jačanju znanja lidera organizacije SMEs uzimajući u obzir prirodu digitalne radne snage. Hipoteza istraživanja, da će strategija ljudskih resursa malih i srednjih preduzeća u daljem sred-njoročnom periodu biti pod jakim uticajem tehnoloških promena koje se manifestuju u šest obrazaca

rada je potvrđena. Metode korišćene u radu su deskriptivna statistika, i fuzzy DEMATEL ekspertska metoda za donošenja odluka. Rad je zasnovan na teorijskim perspektivama i metodološkom pristupu digitalizaciji rada, koji odražava raznolikost na tom polju sa ciljem doprinosa daljem izučavanju   i razvoja baze za HR u digitalnom dobu.

BOOK REVIEW

THE TUNES OF DIPLOMATIC NOTES: MUSIC AND DIPLOMACY IN SOUTHEAST EUROPE (18th – 20th CENTURY)

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The issues of music practices, diplomatic processes, and cultural politics in Southeast Europe seem to have been relatively common in the scholarly discourses for a long time. However, depending on the specific field of knowledge (such as sociology, musicology, politicology, history), these issues tend to be analysed solely from one particular discipline's perspective. Hence, in the sociological, politicological, and historical overviews, the focus is traditionally on what is vaguely labelled as social and historical context and rarely include specific cultural aspects, such as music. Also, in the musicological dealing with politics and social issues, the problematisation easily stays within the boundaries of musical scores and biographical notes on the composers in question. From this perspective, the book *The Tunes of Diplomatic Notes: Music and Diplomacy in Southeast Europe (18th-20th century)*, edited by Ivana Vesić, Vesna Peno, Boštjan Udovič, and published by Belgrade and Ljubljana: Institute of Musicology of the Serbian Academy of Sciences

and Arts, in Belgrade, and the Faculty of Philosophy of the University of Lju-
bljana, stands out by its effort to overcome the thematic mentioned above,
disciplinary, as well as geographical boundaries, bringing together dealing
with the topics of the interrelation of the music practices and diplomacy in
a broader range of interdisciplinary perspectives and on the examples of the
practices in different parts of Southeast Europe.

The book *The Tunes of Diplomatic Notes: Music and Diplomacy in
Southeast Europe (18th-20th century)* is an edited collection resulting from
a scientific project *Identities of Serbian Music Within the Local and Global
Framework: Traditions, Changes, Challenges*), funded by the Ministry of Ed-
ucation, Science and Technological Development of the Republic of Serbia,
and implemented by the Institute of Musicology SASA (Belgrade, Serbia)
and the bilateral project carried out by the Center for International Relations
(Faculty of Social Sciences, University of Ljubljana) and the Institute of Mu-
sicology SASA (Belgrade, Serbia). As stated by the editors, this edited col-
lection "was inspired" (p. 8) by an international conference held in Belgrade
in May 2019, and was the product of a fruitful collaboration of the scholars
from the Institute of Musicology SASA and different academic institutions
from Central and Southeast Europe. The book contains the introduction and
three thematically shaped parts. Unlike numerous introductory parts in sim-
ilar edited collections made as a follow up of a conference, this introductory
chapter is not just a short overview of the reasons and motives for making
the collection (which is to be found in the acknowledgement), but rather an
elaborated chapter which provides insight into the historical, theoretical and
conceptual framework of the book. Hence, it is pointed out that "despite the
long history of using culture for different political purposes and interests", it
was only after creating nation-states and modern mass media this practice
gained prominence (p. 9). From this perspective, it is further explained why
the researchers of this topic mainly focus on the period between 18h and
20th century, particularly the Cold War era. Keeping in mind the mentioned
tendency of many problematisations of diplomacy in scholarly discourses to

neglect the importance of music's role, the editors of this collection set the aim to fill in the missing gap.

The first part, named "Diplomacy behind the scenes: musicians' contact with the diplomatic sphere", contains chapters dealing with specific musical practises and musicians who had diplomatic careers or whose work was related to diplomacy. Those are the chapters on the European character of Dubrovnik and the Dalmatian littoral in the Enlightenment, in which Ivana Tomić Ferić points to the diplomatic ties of Luka and Miho Sorkočević, Julije Bajamonti and Ruđer Bošković; the analysis of the Serbian National Music Project as being constructed as a result of the diplomatic tendencies of the time (by Vesna Peno and Goran Vasin); and an often neglected perspective of the biography of Petar Bingulac, a famous musicologist and music critic – the perspective related to his diplomatic service. The second part of the book – "Reflections of Foreign Policies in National Music Spheres" – moves away from individual narratives on specific musicians towards a more general overview of the interrelations of the music life and diplomacy (in the chapters by Ranka Gašić on the musical life in Belgrade in the context of the global World War Two politics, Srđan Atanasovski on the work of the institution of Cvijeta Zuzorić in Belgrade, Stefanka Georgieva on cultural contacts between Bulgaria and Yugoslavia in the 1930s, Florinela Popa on the Romanian music during the Cold War, and Lenka Křupková on the ideological implications of the avant-garde music practices). This part also includes dealing with the implications of the diplomatic disputes in the scholarly discourses in Serbia and Yugoslavia (in the chapter by Ivana Vesić). The final part of the book refers to the most original perspective of dealing with music and diplomacy, namely, considering the music itself as a means of cultural diplomacy. Unlike the previous ones, in which in most of the chapters the authors consider musical practices as being on one side, and the diplomatic ones as being on the other, the third part of the collection reminds the readers that the actual music should be seen as the medium of its own for pursuing diplomatic endeavours. This task is done in the analyses that deal with the

presentations of the specific political and cultural politics, as shown in the text about the presentation of the "New Yugoslavia" in France after 1945 by Aleksandra Kolaković, and in the chapter about the music politics in Yugoslavia after the split with the USSR by Biljana Milanović. The role of musical folklore in Yugoslavia's Foreign Policy between 1949 and 1971, which is interestingly named "folklore diplomacy", is analysed in the work by Ivan Hofman. Julijana Papazova point to the popular music practices showing how the music activities of Esma Redžepova and the Band Magnifico appear to be an example of one of the Yugoslav music diplomatic procedures; finally, Maja Vasiljević brings an essential contribution to the collection dealing with the often neglected issue of the influence of the Yugoslav non-aligned position on the specific international cultural politics.

Even though the collection provides a vast array of discourses, theoretical platforms, geographical and historical periods, and the parts and chapters are autonomous in their structure and topics, the whole book is united in putting forward a transparent message. Music has never been separated from societal, cultural, as well as political tendencies. Not only it can be easily connected and analysed in the context of global and local diplomacy tendencies, but it is itself one of the necessary means of diplomacy. Most of the chapters explicitly point to this critical insight, whereas all of them together bring to the impression that such conferences and collections fill in the gap between disciplines. Hence, it can be seen as a solid milestone for future collaborations between musicologists and scholars from other backgrounds that would contribute to a more multifaceted approach to the issues that are often unfairly wholly separated but are in fact inextricably linked, such as the issue of music and diplomacy. This collection can be recommended to both musicologists interested in wider political context of specific practices, and politicologists, historians and sociologists, who traditionally tend to ignore music as a relevant aspect of general politics. Additionally, the collection is helpful for further reconstructing and reconfiguring the actual concept of diplomacy.